THE EFFECTS OF AI GENERATED DIGITAL MARKETING CONTENT ON CONSUMER SENTIMENTS AND PURCHASE DECISIONS

by

Joycelyn Sepolen

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Project Approved:

Supervising Professor: Elijah Clark, DBA

Department of Marketing

Stacy Bourgeois, Ph.D.

Department of Supply Chain Management

ABSTRACT

Generative Artificial Intelligence (Gen AI) has garnered significant attention across academic, business, and mainstream spheres due to its ability to simulate human intelligence and perform intellectual activities often more efficiently than humans. This paper synthesizes literature on Gen AI, particularly on its applications in digital marketing, focusing on its implications for content creation. To further examine the uses of Gen AI in digital marketing, this paper explores the effectiveness of Gen AI in creating marketing content, as well as its impact on consumer trust, brand authenticity, and consumer purchase decisions. Following preliminary research, a study was conducted among TCU Neeley School of Business students ages 18 to 26, representative of Generation Z consumers, to garner insights into their ability to differentiate between AI-generated and human-made marketing content. Findings suggest that while most Generation Z consumers can discern AI-generated content, their trust in products/brands and purchase decisions remains largely unaffected by the knowledge that content is AI-generated. Because of these findings this paper suggests that marketers can leverage AI-generated content among Generation Z consumers without significantly impacting consumer trust and perceptions of brand authenticity. However, the study highlights the importance of transparency and ethical considerations in AI-driven marketing to uphold consumer trust and loyalty. Overall, this research contributes to the understanding of Generative AI's role in digital marketing and underscores the importance of responsible and transparent AI use in shaping consumer experiences and perceptions.

TABLE OF CONTENTS

INTRODUCTION

Since the first industrial revolution, technology has greatly reshaped how societies work and run. Beginning in Britain in the 18th century, the First Industrial Revolution transformed many Western societies from agricultural-based to industry-based. Furthermore, the revolution transformed labor from human and animal-based to machine-based, freeing workers to take on specialized trades and skills. The invention of railway transportation and communication systems enabled society to spread out of urban centers and develop cities connected across nations. The Industrial Revolution was characterized by new materials, inventing new machinery and technology, transforming work, and reducing human energy expenditure (Britannica, 2023). The revolution completely reshaped not only industrial spheres, but also agriculture, the economy, trade, political institutions, and culture.

Following the First Industrial Revolution, the world experienced its Second Industrial Revolution, beginning in the late 19th century, with the emergence of new energy sources such as electricity, oil, and gas, as well as new forms of transportation. In the second half of the 20th century, the world saw its Third Industrial Revolution through the emergence of nuclear energy, telecommunication, and computers, which launched human capabilities to that of space expeditions and biotechnology. The rise of the Internet in the 1990s and early 2000s led to the Fourth Industrial Revolution, which has completely reshaped society, many business sectors, and the global economy.

The Fourth Industrial Revolution, beginning in the early 2000s and continuing today, is driven by technological advancements such as artificial intelligence, sensors, and machine learning (Black, 2022). According to the World Economic Forum, the Fourth Industrial

Revolution is a new chapter in human development, enabled by extraordinary technological advances commensurate with those of the first, second, and third revolutions (World Economic Forum, 2023). It has dramatically enabled globalization through the mainstream adoption of technology, such as mobile devices, that has spurred developments like social networks. Today, developments such as artificial intelligence are blurring the lines between previously human-based and virtual activities, furthering the influence of this revolution on society.

Generative Artificial Intelligence, also known as Gen AI, is a significant development of the Fourth Industrial Revolution, with the potential to bring about fundamental changes in various fields such as industry, economy, technology, and education (Ally, 2022). This technology can simulate human intelligence and perform intellectual activities more efficiently than humans. Generative AI utilizes algorithms based on machine learning to take text or code-based inputs and generate images, texts, music, videos, and more (McKinsey & Company, 2023). Advancements such as OpenAI's ChatGPT have significantly increased consumer awareness of Generative AI and its mainstream uses. ChatGPT was adopted by over 100 million active users, just two months after its launch, making it the fastest-growing consumer application in history. While Gen AI has numerous implications across various sectors such as education, healthcare, manufacturing, and business, this paper focuses on its implications in digital marketing.

Generative AI has the potential to revolutionize digital marketing by improving consumer research, personalizing customer experiences, optimizing advertising campaigns, and improving customer engagement (Kumar, 2023; Esch, 2021; Nirwana, 2023). Gen AI has already been implemented in digital marketing, particularly in producing marketing content and advertisements on websites and social media. According to a 2023 survey by the Boston

Consulting Group, some 70% of CMOs say their organization already uses Generative AI for marketing, with another 19% stating that they are testing it (Boston Consulting Group, 2023). The primary use applications of Generative AI include core marketing functions such as content generation, insight generation, and market segmentation. However, the most significant area of focus is personalization, with roughly two-thirds of respondents pursuing efforts (Boston Consulting Group, 2023). BCG (2023) also states that 93% of CMOs implementing Gen AI into their marketing initiatives have reported a 'positive' or 'very positive' improvement from Generative AI.

Some studies have proven a relationship between changing consumer sentiments and AI-generated marketing content. However, few have identified how this content changes consumer sentiments. Additionally, while there is much research on the uses and implications of Generative AI in digital marketing, there is little research about consumer sentiments toward AI-generated marketing content and how this impacts a consumer's likelihood of purchasing a product or service. This paper aims to better understand how consumer sentiment and the likelihood of purchasing change when consumers are aware that marketing content is AI-generated. This paper attempts to do this by first understanding if consumers can differentiate between human-generated and AI-generated marketing content. It then aims to determine how consumer sentiment changes when they are aware that marketing content is AI-generated. More specifically, this research will focus on marketing content, such as email campaigns, Google advertisements, and visual advertisements for social media.

This research will not "predict" every consumer's sentiment toward AI-generated marketing content. However, it will provide a foundation for marketers to better understand consumer attitudes toward AI-generated content and how differing sentiments influence

consumers' likelihood of purchasing a product or service. As the influence of Generative AI has the potential to grow even more, business leaders must understand how consumers perceive AI-generated content and how this affects their likelihood of purchasing a product or service. Understanding this trend will also help business leaders understand how to develop responsible AI practices to mitigate the adverse effects of AI-generated content on consumers.

This paper reviews the literature on Generative AI, digital marketing, digital advertisements, and consumer sentiment to study consumers' attitudes toward AI-generated marketing content. The literature review also studies articles by well-known publishers on the ethical issues and responsible use of Generative AI, due to the limited research on this novel technology. The study conducted in this paper will collect information from Texas Christian University Neeley School of Business Students to analyze and draw insights into Generation Z consumers' sentiments toward AI-generated marketing content. Limiting the scale of the survey audience allows for a controlled sample to identify differing consumer sentiments more easily.

LITERATURE REVIEW

Generative Artificial Intelligence

Generative Artificial Intelligence, or Gen AI, is a popular field of study amongst current academic, business, and mainstream discussions. However, discussions around the potential uses of Generative AI are broad. According to Nalini (2023), Generative AI is a field focused on creating models that produce new data similar to given datasets. This technology mimics human creativity by learning patterns and distributions from existing data. Learning a model that captures the underlying patterns and structures of the data is the fundamental idea behind Generative AI (Nalini, 2023).

Furthermore, Generative AI can create images, texts, music, videos, and more. Generative AI has numerous use cases in education, business, and even for mainstream consumers. For example, Generative AI can be used in education to create personalized lessons for students, design courses, and even create tutoring bots. Additionally, Generative AI has mainstream uses such as music, image, and text generation for communication.

A notable development in the field of Generative AI is the emergence of software like ChatGPT, which utilizes natural language processing to facilitate interactive engagements with users. The widespread mainstream adoption of Generative AI software, such as ChatGPT, has exposed millions of consumers to the powers of Generative AI technology. OpenAI's ChatGPT was adopted by over 100 million active users, just two months after its launch, making It the fastest-growing consumer application in history, according to a USB study (Hu, 2023). The quick and widespread adoption of Chat GPT indicates consumers' readiness to work with such applications.

Another approach to Generative AI is Generative Adversarial Networks (GANs), which have successfully generated realistic high-resolution images (Goodfellow, 2014). These networks are based on game theory, presenting unique challenges and research opportunities (Goodfellow, 2020). Generative adversarial networks use adversarial training to generate new samples with the same statistics as the training samples. These new samples can be generated in different formats. For example, GANs can analyze a text training sample to generate an image replica of that sample. These GANs can be used in numerous business applications, such as marketing, to quickly generate high-resolution images for advertisements and promotions. Furthermore, GANs can generate image concepts for products, in-store displays, and physical promotions.

Digital Marketing

To look at the uses of Generative AI in digital marketing, we must first define digital marketing. Digital marketing is marketing products or services using digital technologies, mainly on the Internet, including mobile devices, display advertising, and social media advertising (Desai, 2019). This can also be referred to as 'online marketing,' 'Internet marketing,' or 'web marketing.' The development of digital marketing since the 1990s and 2000s has changed how brands and businesses use technology for marketing. Digital marketing has enabled companies to reduce costs, expand their customer base, and increase the effectiveness of advertising activities.

Moreover, it has provided opportunities for businesses to improve their marketing tactics by focusing on customer experience and solving customer problems. Today, an integrated approach combining traditional and online channels is necessary to reach a business's target audience. As digital platforms are increasingly incorporated into marketing plans and everyday life, and people use digital devices instead of visiting physical shops, digital marketing campaigns are becoming more prevalent and efficient (Desai, 2019).

Moreover, visual marketing is highly effective, with studies showing that our brains process visual information much faster than text. Artificial intelligence, particularly with the assistance of Generative Adversarial Networks (GANs), has the potential to transform human thoughts into visual representations and will be a revolutionary tool in the visual marketing field (Mayahi, 2022). Because of the numerous advantages of visualizing information for consumers, Generative AI is an essential tool for marketers to implement to speed up the process of creating visual marketing advertisements.

Digital Advertisements

Digital advertisements are a vital component of online marketing, utilizing various formats such as text, banner, and video ads to reach and engage with potential customers (Shanahan, 2011). Digital advertising is believed to be an effective way to better target potential customers in the global market. These ads are highly targeted and personalized, often using statistical machine learning and data-centric processes to optimize their effectiveness (Shanahan, 2011). Compared to traditional media advertising, digital ads are more effective in targeting and engaging with customers, particularly among younger demographics (Fuxman, 2014). The concept of digital engagement with advertising, which includes interactions with branded content, is an essential aspect of digital advertising, with social network advertising being a significant driver of consumer engagement (Rodgers, 2018). Digital engagement for digital advertisements is typically measured through click-through rates, conversion rates, customer acquisition rates, and cost-per-click metrics. These performance metrics indicate the success of digital advertisements in attracting, engaging, and acquiring customers.

A key feature of digital advertising is its interactivity and analytical resources that provide personalization. At its core, personalization is the process of understanding a person's true intentions, desires, and needs, as well as the transfer of relevant, targeted experiences for that person (Godwin, 2019). Personalized advertisements have been shown to boost customer engagement across numerous studies. Hyper-personalized content can also save costs by delivering more relevant experiences, helping marketers to reach their desired audience more effectively and with less waste. Generative AI can be integrated into digital advertising tactics to enhance this personalization further.

Generative AI in Digital Marketing

Generative AI has the potential to revolutionize digital marketing by personalizing customer experiences, optimizing advertising campaigns, and improving customer engagement (Kumar, 2023; Esch, 2021). AI can also be used to understand target audiences, personalize marketing content, understand consumer behavior and preferences, formulate verbal and visual digital marketing content, and monitor and evaluate the performance of advertising campaigns effectively (Nirwana, 2023). Generative AI has been implemented in digital marketing, particularly in producing marketing content and advertisements on websites and social media. Gen AI enables nearly instantaneous marketing content creation and personalized content for consumers. According to Siddiqui (2022), powerful artificial intelligence lays the foundations for digital marketing, particularly in data processing and customized targeting. AI is assisting marketers in personalizing visual and textual content according to each user's preference, saving time and money in some circumstances. Generative AI can even produce one-to-one hyper-personalized marketing content for consumers. By analyzing consumer data, Generative AI can produce ads, email copies, and marketing messages personalized to a consumer's personal information, preferences, and willingness to pay.

Challenges with Generative AI in Digital Marketing

The use of AI in digital marketing also raises ethical questions, such as a lack of interpretability, bias and discrimination, privacy, lack of model robustness, fake and misleading content, copyright implications, plagiarism, and environmental impact associated with training of Generative AI models (Kenthapadi, 2023). The most applicable concerns for digital marketing appear to be consumer privacy, copyright implications, and plagiarism. The lack of interpretability and model robustness in Generative AI models further exacerbates these issues (Kenthapadi, 2023). Despite these challenges, the application of AI in marketing is still in its

early stages, and further research is needed to fully understand its capabilities and limitations (Esch, 2021).

Maintaining a consistent brand voice and tone throughout marketing content can be challenging when relying on AI. Moreover, many AI models rely on web-based databases allowing them to generate digital advertisements that are similar to native advertisements. This creates the potential for numerous copyright and even plagiarism issues that can have profound legal implications for marketers. Moreover, the commercialization of Generative AI could also lead to integrating native advertising in web search results, blurring the line between organic and paid content (Zelch, 2023). Similarly, the evolution of search engine results pages may blur the line between advertising-based and organic search results, making it difficult for consumers to distinguish between them.

Finally, Generative AI can lead to ethical issues such as the misuse of consumer data. Businesses must implement regulations for the use of consumer data within AI models. These regulations should comply with company-wide consumer data privacy rules and consider the implications of uploading consumer data to web-wide Generative AI tools. AI tools such as ChatGPT have few restrictions on inputted data, creating many data privacy issues for companies. Ultimately, marketers adopting Generative AI must carefully consider the ethical implications, including those related to security, privacy, and regulations.

Responsible use of Generative AI in Digital Marketing

While some governments are attempting to enact laws and regulations to mitigate the risks of AI, few have been able to do so, leaving it up to corporations to decide how to use Generative AI responsibly. For companies to continue leveraging the advantages presented by AI

in marketing while avoiding overlooking potential opportunities and threats, the current ethical framework of AI needs to be enhanced by assessing the pros and cons for all parties involved and considering the overall benefits and drawbacks (Hermann, 2022). Additionally, privacy concerns and the ethical use of customer data need to be addressed to maintain trust and compliance with data protection regulations.

Baxter and Schlesinger (2023) suggest making every effort to mitigate bias, toxicity, and harmful outputs by conducting bias, explainability, and robustness assessments. Additionally, Siddiqui (2022) advises businesses to safeguard their clients' privacy, obtain permission to utilize data, and constantly follow the wishes of their customers. Furthermore, businesses must verify the outputs of Generative AI from a data management perspective. This involves analyzing the underlying data and assessing its quality and consistency to ensure the correctness of Generative AI outputs and promote transparency. Many marketing teams are creating unique customer solutions by adapting off-the-shelf AI models trained on smaller, task-specific data sets (Robinson, 2023). This helps to mitigate the potential ethical issues of Generative AI, while improving the personalization of marketing content for consumers.

Customer Sentiment

Customer sentiment, as defined by Papafotikas (2020), refers to the emotions and attitudes expressed by customers, which can be positive, negative, or neutral. This sentiment can significantly influence decision-making and product perception (Khan, 2011). When customer sentiments towards marketing advertisements are positive, customers are more likely to purchase the corresponding product or service. Additionally, the sentiments of other consumers can affect

how customers feel about a product. When an important decision needs to be made, consumers typically want to know the sentiments and emotions of others.

Sentiment analysis, a key tool in understanding customer sentiment, involves extracting information from opinions and emotions (Khan, 2011). Sentiment analysis allows companies to analyze unstructured content from social media sites and the Internet, such as opinions, attitudes, and emotions directed at a particular entity, providing critical information for marketing improvements (Olivera, 2018). This analysis can be applied to various domains, including online customer reviews and product advertising. By analyzing sentiments toward digital advertisements, marketers can better understand how advertisements will be perceived by and influence customers. Additionally, marketers can use this information to analyze how consumer perceptions of advertisements influence the likelihood of that individual purchasing the product/service. This research can be crucial to ensuring the success of marketing and advertising campaigns.

Customer Sentiments Toward AI-Generated Marketing Content

Various factors influence consumer sentiments toward AI-generated marketing content. Wu (2021) found that consumers perceived the objectivity of the general advertisement creation process positively—a rule of thumb that machines are more secure and trustworthy than humans. This effect boosted consumer appreciation of AI-created advertisements. Moreover, Wu found that consumers' perceived objectivity of advertisement creation negatively influenced the perceived eeriness of AI advertising, which jeopardized consumer appreciation of AI-created advertisements (Wu, 2021). Additionally, consumers' feelings of uneasiness with robots were found to positively influence both machine heuristics and the perceived eeriness of AI

advertising. This is further supported by Noranee (2023), who highlights the positive effects of AI on consumers, understanding consumer sentiments through sentiment analysis and enabling marketers to make data-driven decisions for customers. Additionally, Demba (2019) underscores the positive relationship between user-generated content, brand trust, and purchase intention, suggesting that AI-generated content may also have a similar impact.

There are two models that can be looked at to better understand consumer perceptions toward AI-generated marketing content. First, the Elaboration Likelihood Model (ELM), developed by Richard E. Petty and John Cacioppo, argues that consumers engage in two types of processing when encountering persuasive messages: central and peripheral. Central processing involves thoughtful consideration of message content, while peripheral processing involves relying on cues such as source credibility or message length (Petty, 2011). Additionally, the ELM suggests that variables such as the attractiveness of a message or emotion of a person experiencing that message can affect how much thinking a person is doing (Petty, 2011). In the context of AI-generated marketing content, consumers may engage in central processing when they become aware that the content is AI-generated, leading to changes in their relatedness to the brand based on their perceptions of the AI's capabilities and trustworthiness.

The Technology Acceptance Model, introduced by Fred Davis in 1986, proposes that perceived usefulness and perceived ease of use are key determinants of an individual's intention to use technology (Na, 2023). Applied to AI-generated marketing content, consumers' perceptions of the relevance and ease of use of AI-generated content may influence their relatedness to the brand. For example, if consumers perceive AI-generated content as providing relevant and personalized recommendations, they may develop a stronger relationship with the brand. Ultimately, there is limited research on the effect of AI-generated marketing content on

consumer sentiment, which is why this paper will focus on researching the effect of AI-generated marketing ads on consumer sentiment and likeliness to purchase a product/service.

Hypotheses

Prior to conducting primary research on the effect of AI-generated marketing ads on consumer sentiments and purchase decisions we outlined the following hypotheses.

H1: Generation Z (Gen Z) consumers will have difficulty differentiating between human-generated and AI-generated marketing content.

H2: Gen Z consumers' likelihood of purchasing a product will be negatively influenced by being informed that marketing content is AI-generated.

H3: Gen Z consumers' perceptions of brand authenticity will differ between consumers who believed a piece of marketing content was made by a human and then informed it was AI-generated and those who originally identified the content as AI-generated.

H4: Gen Z consumers' trust in a brand will differ between consumers who believed a piece of marketing content was made by a human and then informed it was AI-generated and those who originally identified the content as AI-generated.

H5: Gen Z consumers' trust in a product will differ between consumers who believed a piece of marketing content was made by a human and then informed it was AI-generated and those who originally identified the content as AI-generated.

METHODOLOGY

This section aims to explain the methodology behind the study and how it will be conducted. This section will elaborate on the study's purpose, how it will be conducted, how it will be distributed, and the population of focus. Additionally, it will elaborate on the variables of

interest to the study and the data that will be collected to enhance the research analysis. Finally, this section aims to provide details for future scholars to replicate the study in their domains.

This study aims to provide a deeper understanding of how consumer sentiment and the likelihood of purchasing a product/service change when consumers are aware that marketing content is AI-generated. Additionally, it seeks to contribute to the understanding of how Generative AI marketing technology and techniques influence consumer behavior.

The study will first understand if consumers can differentiate between human-generated and AI-generated marketing content. It then aims to determine how consumer sentiment changes when consumers are aware that marketing content is AI-generated. This study will not be able to "predict" every consumer's sentiment towards AI-generated marketing content. However, it will provide a foundation for marketers to better understand potential attitudes toward AI-generated marketing content and their implications on the likelihood of purchasing a product. Therefore, the research question for the study is, 'Does a consumer's likelihood of purchasing a product or service change when they are aware that marketing content is AI-generated?.'

Research Objectives

There are three main objectives in conducting this study:

1. To determine if Generation Z (Gen Z) consumers can differentiate between human-generated and AI-generated marketing content, including image-based ads, social media posts, and email marketing messages.
2. To investigate how Gen Z consumers' likelihood of purchasing a product or service is influenced by the awareness that marketing content is AI-generated.

3. To investigate how Gen Z consumers' perceptions of brand authenticity, brand trust, and product trust are influenced by the awareness that marketing content is AI-generated.

With this study we expect to demonstrate whether Generation Z consumers can distinguish between human-generated and AI-generated marketing content, which could inform marketers about the effectiveness of AI-generated content. Additionally we aim to discover how consumer sentiments and likelihood of purchasing a product/service change when consumers become aware of AI-generated content, providing insights into the potential impact of transparency in marketing strategies. Moreover, we expect to contribute to discussions surrounding the responsible use of Generative AI in digital marketing, addressing ethical concerns and potential regulatory implications.

Study Design

This study surveyed Texas Christian University Neeley School of Business students, who are representatives of Generation Z consumers, about their attitudes towards AI-generated marketing content, such as email newsletters, social media ads, and web-based ads. To carry out the study, a Qualtrics survey was developed to measure TCU students' attitudes towards AI-generated marketing content. This survey received IRB exempt status through TCU.

There were 3 prerequisites for taking the survey. Participants must be an enrolled undergraduate at TCU, a Neeley School of Business major and/or minor, and between the ages of 18 and 26. The survey was limited to only TCU business students age 18 to 26 because of its focus on Generation Z consumers in the United States who have some prior exposure to AI, Generative AI, or AI-generated content.

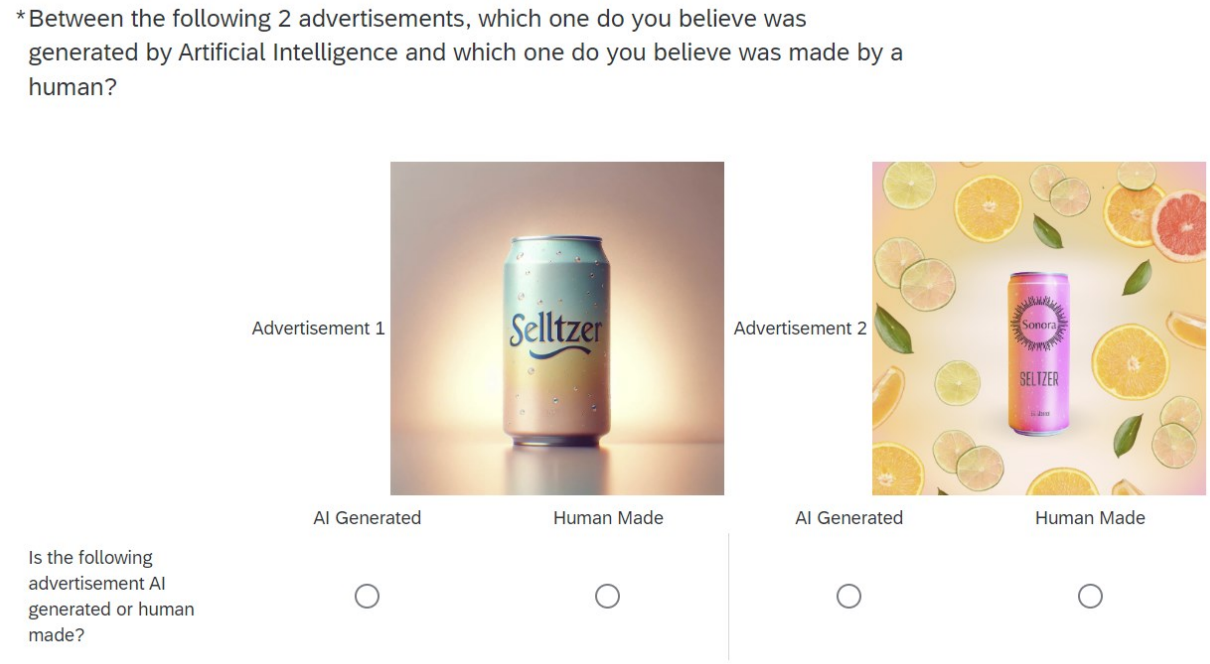
The survey began with a research information section to assess and record participant consent. Then participants were screened on their age and major/minor to ensure fit with the survey requirements. The bulk of the survey consisted of four main prompts asking participants to select which version of an advertisement was AI-generated and which was human made. Participants were not allowed to double select and were required to select one advertisement as human-made and one as AI-generated. All advertisements used fake brands and products, to control for prior brand associations and product perceptions. Following prompt 1, prompt 3, and prompt 4 participants were informed which version was generated by AI and were given a series of Likert scales assessing their perceptions of product trust, brand trust, authenticity, product quality, and likelihood of purchasing the product. For prompt 2, only participants who incorrectly identified the advertisement generated by AI were prompted with follow up questions regarding their perceptions toward the brand and product. The survey also offered a deception in prompt 3, where both advertisements were generated by AI, to assess if consumers' perceptions changed based on being informed that the marketing content is AI-generated, regardless of how it was actually generated.

Likeliness of purchasing the product was tracked through a Likert scale ranging from 'Extremely Unlikely' to 'Extremely Likely.' Trust in the product, trust in the brand, brand authenticity, and product quality were tracked through a series of Likert scales ranging from 'Strongly Disagree" to "Strongly Agree". The survey concluded with an optional demographics section to improve research data analysis. Participants were also asked about their degree of experience with Generative AI ranging from 'No experience at all' to 'Extremely experienced'. The survey was pilot-tested prior to official administration through the Neeley School of Business. Data was collected in March 2024. The estimated time to complete the survey was 8

minutes. A convenience sample of 61 undergraduate business students age 18 to 22 completed the survey.

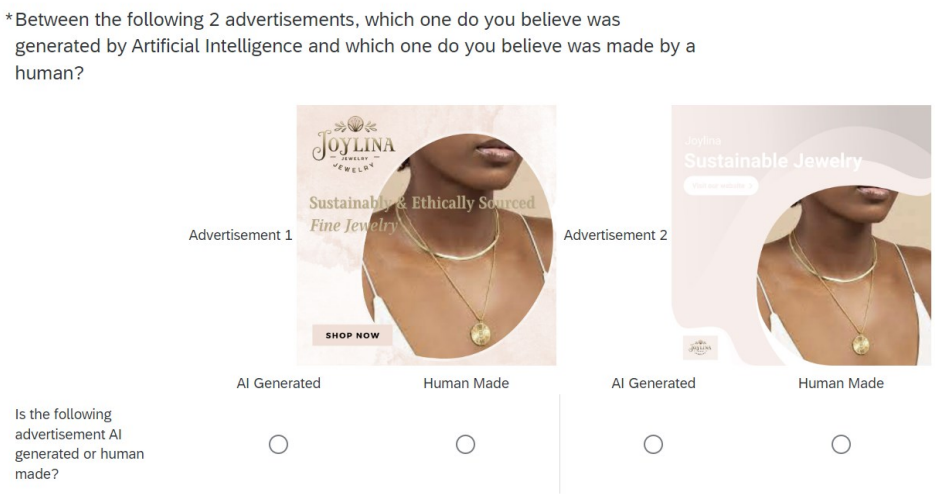
The following 4 prompts were created to analyze if Generation Z consumers can differentiate between AI-generated and human made marketing content.

Prompt 1



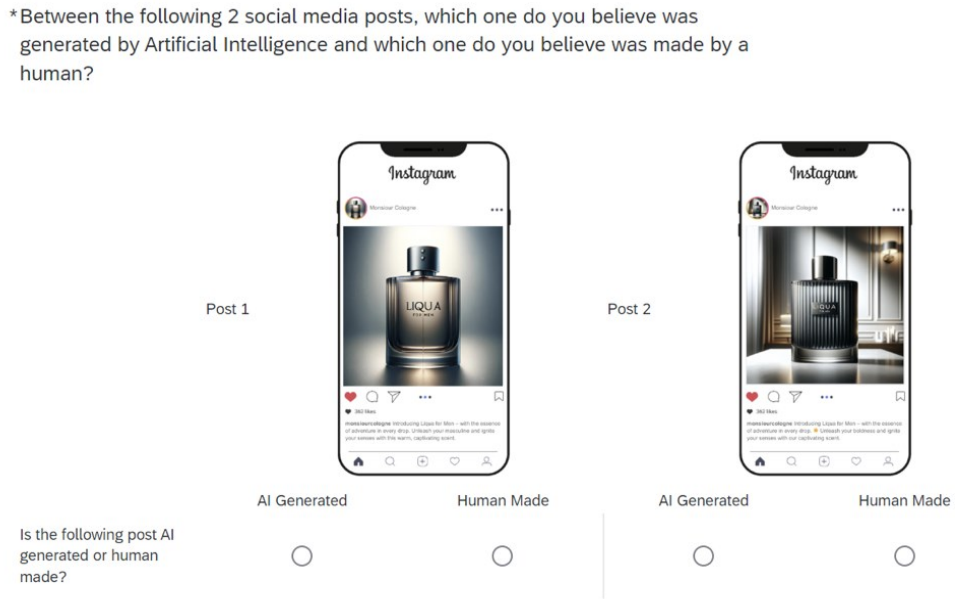
Prompt 1 was created using ChatGPT Dall-E 3 and Canva. Both the AI-generated and human made advertisements were designed as simple image-based advertisements that focused on the launch of a new fruity hard seltzer beverage for summer. The advertisements were designed to appeal to a mostly female young and active target audience, that enjoy socializing outdoors with friends.

Prompt 2



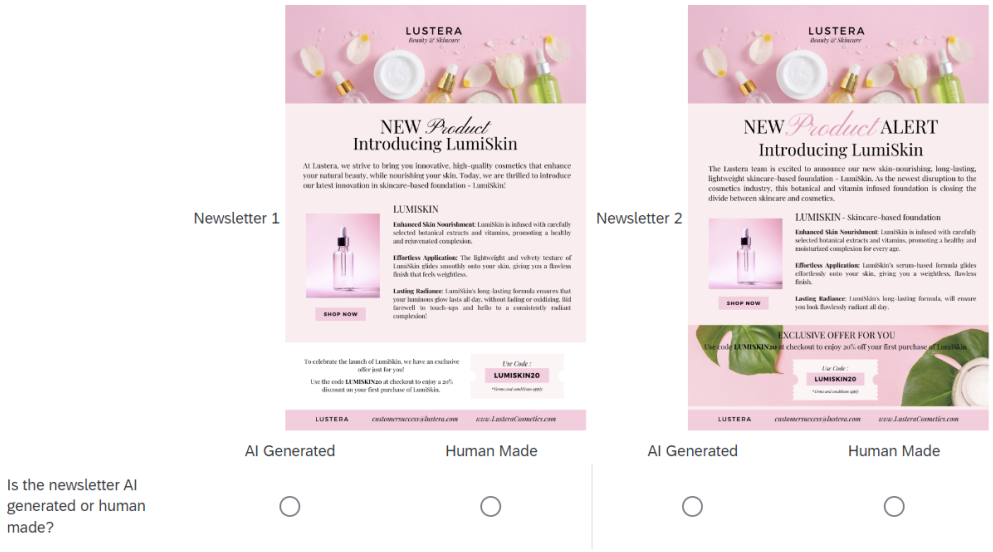
Prompt 2 was created using AdCreative.ai and Canva. Both the AI-generated and human made advertisements were designed as paid social media advertisements, promoting a sustainable and ethically sourced jewelry brand. The advertisements were designed to target a millennial, female target audience who are environmentally conscious and make over $85,000 per year.

Prompt 3 - DECEPTION



Both advertisements for the deception in prompt 3 were generated using ChatGPT's DallE. Canva was used to overlay the AI-Generated advertisements and captions onto an Instagram post frame. Both social media posts were designed as image-based advertisements, promoting the launch of a new cologne called Liquia. The posts were designed to target males ages 25 to 40, who are heavy social media users, have self-care routines, and are active.

Prompt 4



Prompt 4 was created using Copy.AI and Canva. We used Copy.AI to generate the email newsletter copy for Advertisement 1, the AI-generated advertisement, and Canva to add the copy to a basic email newsletter template. We used the same template for the human-made advertisement, to encourage participants to focus on differences in the copy of the newsletter not just design. We wrote our own copy for the newsletter. Both newsletters were created to promote the launch of a new skincare-based foundation. The copy for both newsletters was designed to appeal to females ages 40 to 55, who are active, live healthy lifestyles, and are conscious of the ingredients used in their products.

ANALYSIS

We used SPSS to analyze the survey results and data. The first step in data analysis was to assess the accuracy of participant responses in identifying whether a given piece of marketing content was AI-generated or human-generated. To do this we analyzed the frequency of correct response and incorrect responses for all four prompts. Additionally, we analyzed the frequency of correct responses among varying levels of experience with Generative AI. In addition, we conducted an ANOVA difference of means test for prompts 1, 3, and 4 to determine if there were any statistically significant differences in participants' likelihood of purchasing a product before and after being informed that the marketing content is AI-generated. This test assessed whether there was a significant difference in mean likelihood to purchase scores for participants who correctly identified the advertisement as Gen AI and those who were informed that an advertisement they believed was human made was AI-generated. Similar to the analysis for likelihood of purchasing, an ANOVA test was conducted for prompts 1, 3, and 4 to determine if there were any significant differences in participants' perceptions of brand authenticity, trust, and loyalty between those who correctly identified the advertisement generated by AI and those who were informed that an advertisement they believed was human made was AI-generated. An ANOVA test could not be conducted for prompt 2, because only participants who correctly identified the advertisement generated by AI were questioned about their sentiments and likelihood of purchasing the product. Therefore, we lacked responses for the sample who did correctly identify the AI-generated advertisement in prompt 2, prohibiting us from comparing the means between the two samples.

RESULTS

Ability to Differentiate between AI-Generated and Human Made Marketing Content

Participants' ability to differentiate between AI-generated and human made content differed based on the type of content. In prompt 1, out of 57 complete responses, 54 or 94.7% of participants correctly identified the image-based advertisement generated by AI. Of the 54 who correctly identified the advertisement generated by AI, 3.5% had no Generative AI experience at all, 22.2% were slightly experienced in Gen AI, 48.1% were moderately experience, 18.5% were very experienced, and 7.4% were extremely experienced. In prompt 2, out of 57 complete responses, 43 or 75.4% of participants correctly identified the pop-up social media advertisement generated by AI. Of the 43 participants who correctly identified the advertisement generated by AI, 4.7% had no Gen AI experience at all, 18.6% were slightly experienced, 46.5% were moderately experienced, 20.9% were very experienced, and 9.3% were extremely experienced. Out of 57 responses in prompt 3, 29 believed post 1 was AI-generated and 28 believed post 2 was AI-generated. This nearly 50% split on the deception prompt where both posts were generated by AI, further supports Gen Z consumers' ability to differentiate between AI-generated and human made advertisements. When both advertisements were generated by AI, participants had a difficult time differentiating one as more AI-generated than another. Finally, out of 57 complete responses 30 or 54.4% of participants correctly identified the email newsletter generated by AI in prompt 4. Of the 30 who correctly identified the email newsletter generated by AI, 6.7% had no Gen AI experience at all, 20% were slightly experienced with Gen AI, 46.7% were moderately experienced, 20% were very experienced, and 6.7% were very experienced. An ANOVA test was conducted to determine if there was a significant difference in mean levels of correct identification of the AI-generated advertisement between groups with

different levels of experience with generative AI. The test showed no significant difference in mean value of correct identification of the AI-generated advertisement based on level of experience with Generative AI.

Difference in Mean Trust in The Product

Prompt 1		Sum of Squares	df	Mean square	F	Sig.
Knowing that the seltzer advertisement was generated by Artificial Intelligence, how would you rate the following variables? - I trust the product	Between Groups	.165	1	.165	.157	.694
	Within Groups	57.870	55	1.052		
	Total	58.035	56			

Prompt 3 - DECEPTION		Sum of Squares	df	Mean square	F	Sig.
Knowing that the social media post was generated by Artificial Intelligence, how would you rate the following variables? - I trust the product	Between Groups	.065	1	.065	.070	.793
	Within Groups	51.654	55	.939		
	Total	51.719	56			

Prompt 4		Sum of Squares	df	Mean square	F	Sig.
Knowing that the email was written by a human, how would you rate the following variables? - I trust the product	Between Groups	.487	1	.487	.565	.455
	Within Groups	47.407	55	.862		
	Total	47.895	56			

The ANOVA tables for significant difference in mean ratings or trust in product for prompts 1, prompt 3, and prompt 4 indicated that there was no significant difference in mean levels of trust in the product among sample 1 participants who correctly believed a piece of marketing content was AI-generated and sample 2 participants who incorrectly believed a piece of marketing content was made by a human only to be informed that it was generated by AI. Based on a set significance level of 95%, the significance value of .694 for prompt 1, .793 for prompt 3, and .455 for prompt 4 all indicate that there is no significant difference in mean levels of trust in the product between sample 1 and sample 2 for all 3 advertisements prompts shown. This indicates that participants' trust in the product was not significantly influenced by being informed of the AI-generated nature of the marketing content.

Difference in Mean Trust in The Brand

Prompt 1		Sum of Squares	df	Mean square	F	Sig.
Knowing that the seltzer advertisement was generated by Artificial Intelligence, how would you rate the following variables? - I trust the brand	Between Groups	.024	1	.024	.026	.873
	Within Groups	51.870	55	.943		
	Total	51.895	56			

Prompt 3 - DECEPTION		Sum of Squares	df	Mean square	F	Sig.
Knowing that the social media post was generated by Artificial Intelligence, how would you rate the following variables? - I trust the brand	Between Groups	1.416	1	1.416	1.510	.224
	Within Groups	51.567	55	.938		
	Total	52.982	56			

Prompt 4		Sum of Squares	df	Mean square	F	Sig.
Knowing that the email was written by a human, how would you rate the following variables? - I trust the brand	Between Groups	.239	1	.239	.314	.577
	Within Groups	41.796	55	.760		
	Total	42.035	56			

The ANOVA tables for significant difference in mean ratings or trust in brand for prompts 1, prompt 3, and prompt 4 indicated that there was no significant difference in mean levels of trust in the brand among sample 1 participants who correctly believed a piece of marketing content was AI-generated and sample 2 participants who incorrectly believed a piece of marketing content was made by a human only to be informed that it was generated by AI. Based on a set significance level of 95%, the significance value of .873 for prompt 1, .224 for prompt 3, and .577 for prompt 4 all indicate that there is no significant difference in mean levels of trust in the brand between sample 1 and sample 2 for all 3 advertisements prompts shown. This indicates that participants' trust in the brand was not significantly influenced by being informed of the AI-generated nature of the marketing content.

Difference in Mean Ratings of Brand Authenticity

Prompt 3 - DECEPTION		Sum of Squares	df	Mean square	F	Sig.
Knowing that the social media post was generated by Artificial Intelligence, how would you rate the following	Between Groups	5.576	1	5.576	5.227	.026
	Within Groups	58.670	55	1.067		

variables? - I view the brand as authentic	Total	64.246	56			

Prompt 4		Sum of Squares	df	Mean square	F	Sig.
Knowing that the email was written by a human, how would you rate the following variables? - I view the brand as authentic	Between Groups	.798	1	.798	.636	.429
	Within Groups	69.096	55	1.256		
	Total	69.895	56			

The ANOVA tables for significant difference in mean ratings of authenticity of the brand for prompt 3 and prompt 4 indicated that there was no significant difference in mean ratings of authenticity of the brand among sample 1 participants who correctly believed a piece of marketing content was AI-generated and sample 2 participants who incorrectly believed a piece of marketing content was made by a human only to be informed that it was generated by AI. Participants were not asked about their perceptions of brand authenticity for prompt 1. Based on a set significance level of 95%, the significance value of .429 for prompt 4 indicates that there is no significant difference in mean levels of trust in the brand between sample 1 and sample 2. The significance value of .026 for prompt 3, indicates that there was a statistically significant difference in means for sample 1 and sample 2, however this difference in means indicates a difference in consumer perceptions between two groups that both thought an advertisement was made by a human only to be informed that it was generated by AI. This indicates that participants' perceptions of brand authenticity were not significantly influenced by being

informed of the AI-generated nature of the marketing content, but rather by other factors such as the design of the advertisements themselves.

Difference in Mean Likelihood of Purchase

Prompt 1		Sum of Squares	df	Mean square	F	Sig.
Knowing that the seltzer advertisement was generated by Artificial Intelligence, how likely are you to purchase the product? - How likely are you to purchase this product?	Between Groups	.001	1	.001	.001	.975
	Within Groups	54.981	55	1.000		
	Total	54.982	56			

Prompt 3 - DECEPTION		Sum of Squares	df	Mean square	F	Sig.
Knowing that the social media post was generated by Artificial Intelligence, how likely are you to purchase the product? - How likely are you to purchase this product?	Between Groups	.128	1	.128	.136	.714
	Within Groups	51.802	55	.942		
	Total	51.930	56			

Prompt 4		Sum of Squares	df	Mean square	F	Sig.
Knowing that the email was written by a human, how likely are you to purchase the product? - How likely are you to purchase this product?	Between Groups	.725	1	.725	1.168	.285
	Within Groups	34.152	55	.621		
	Total	34.877	56			

The ANOVA tables for significant difference in mean likelihood of purchase for prompts 1, prompt 3, and prompt 4 indicated that there was no significant difference in mean levels of likelihood of purchasing the product among sample 1 participants who correctly believed a piece of marketing content was AI-generated and sample 2 participants who incorrectly believed a piece of marketing content was made by a human only to be informed that it was generated by AI. Based on a set significance level of 95%, the significance value of .975 for prompt 1, .714 for prompt 3, and .285 for prompt 4 all indicate that there is no significant difference in mean levels of trust in the brand between sample 1 and sample 2 for all 3 advertisements prompts shown. This indicates that participants' likelihood of purchasing a product was not significantly influenced by being informed of the AI-generated nature of the marketing content.

DISCUSSION OF IMPLICATIONS

Because most Generation Z consumers can differentiate between AI-generated and human made marketing content, marketers should be transparent with their AI use. AI transparency can help foster trust among Generation Z consumers who have Gen AI content exposure and will likely know the true nature of an advertisement. The findings also suggest that Gen Z consumers' trust in both the product and brand remains consistent regardless of whether they believe the marketing content is AI-generated or human-made. This implies that marketers can leverage AI-generated content without significantly impacting consumer trust. This is especially true for text-based marketing content, which Gen Z consumers had a difficult time distinguishing as AI-generated. Similarly, Gen Z consumers’ perceptions of brand authenticity were not significantly influenced. This indicates that marketers may use AI-generated content as part of their brand-building efforts without compromising brand authenticity. However, it's crucial for marketers to ensure that AI-generated content aligns with the brand's values,

messaging, and aesthetics. Additionally, it is essential that marketers prioritize ethical considerations when utilizing AI-generated content. This includes transparency in disclosing the use of AI technology, respecting consumer privacy, and avoiding deceptive practices.

It is important to note that these implications may evolve as AI and Generative AI technologies advance and consumer preferences shift. To keep us with these changes, marketers should continuously monitor consumer perceptions and adapt their strategies accordingly. This may involve conducting regular consumer surveys, tracking consumer sentiment on social media, and staying updated on industry trends and best practices in AI-driven marketing.

Overall, the implications suggest that AI-generated content can be a valuable tool for marketers to enhance personalization, engagement, and efficiency in their marketing efforts, without negatively influencing perceptions of trust, authenticity, and purchase decisions among Gen Z consumers. However, it is essential for marketers to prioritize ethical considerations regarding AI, such as data privacy and usage transparency, to maintain consumer trust and achieve long-term success.

LIMITATIONS

Because the study primarily focuses on Generation Z consumers who are undergraduate business students at Texas Christian University, the findings may not be representative of broader consumer demographics, limiting the generalizability of the results to other age groups, educational backgrounds, or geographic regions. Additionally, the study relies on a convenience sample of undergraduate business students ages 18 to 26 from TCU, which may not accurately represent the diversity of Generation Z consumers, leading to potential biases in the results. Moreover, focusing solely on business students at TCU's Neeley School of Business means the

students may have more exposure to and understanding of AI-generated advertisements. The study also collected data from a relatively small sample of 61 participants, which may limit the statistical power and reliability of the findings. A larger sample size would provide more robust results and increase the generalizability of the findings to the broader population of Generation Z consumers. It is also important to note that the study relies on self-reported data, which may introduce response bias. Participants may be encouraged to provide responses they perceive as favorable. The study also faces limitations in controlling external factors that could influence consumer perceptions and behaviors, such as the design of marketing content, quality of product images, and cultural and socioeconomic differences between participants. These limitations may inhibit the ability to draw direct conclusions about the impact of AI-generated marketing content on consumer perceptions and purchasing decisions. Addressing these limitations in future studies would enhance the validity, reliability, and applicability of the study's findings.

CONCLUSION

Our findings reveal that the majority of Generation Z consumers possess the ability to discern between AI-generated and human-made marketing content. In addition, Gen Z consumers' trust in both the product and brand, as well as likelihood of purchasing the product, remains steadfast regardless of their awareness of AI's involvement in content creation. This suggests that marketers can leverage AI-generated content without substantially impacting consumer trust, brand authenticity, and purchase decisions. Despite this, upholding transparency and authenticity in communication is crucial to maintain consumer trust among Generation Z demographics. However, it is crucial to acknowledge the limitations inherent in our study, including its focus on a specific demographic of Gen Z undergraduate business students at TCU

its and small convenience sample size. These limitations underscore the necessity for further research to validate the findings across diverse consumer demographics.

Our research illustrates that AI-generated content can serve as a valuable tool for marketers to augment personalization, engagement, and efficiency in their digital marketing and content creation. By judiciously leveraging Generative AI technology, marketers have the potential to enhance the effectiveness of their campaigns without compromising consumer trust or brand authenticity. Ultimately, our research contributes to the understanding of the role of Generative AI in digital marketing and develops insights for marketers to navigate the evolving landscape of AI-driven marketing strategies transparently and ethically. By prioritizing transparency, authenticity, and ethical considerations, marketers can harness the capabilities of Generative AI to develop deeper connections with Generation Z consumers and propel business outcomes without harming consumer trust, brand authenticity, and consumer purchase decisions among the Generation Z demographic.

APPENDIX

TABLE 1: Prompt 1 Difference in Means ANOVA Table

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Knowing that the seltzer advertisement was generated by Artificial Intelligence, how would you rate the following variables? - I trust the product	Between Groups	.165	1	.165	.157	.694
	Within Groups	57.870	55	1.052		
	Total	58.035	56			
Knowing that the seltzer advertisement was generated by Artificial Intelligence, how would you rate the following variables? - I trust the brand	Between Groups	.024	1	.024	.026	.873
	Within Groups	51.870	55	.943		
	Total	51.895	56			
Knowing that the seltzer advertisement was generated by Artificial Intelligence, how likely are you to purchase the product? - How likely are you to purchase this product?	Between Groups	.001	1	.001	.001	.975
	Within Groups	54.981	55	1.000		
	Total	54.982	56			

TABLE 2: Prompt 3 Difference in Means ANOVA Table

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Knowing that the social media post was generated by Artificial Intelligence, how would you rate the following variables? - I trust the product	Between Groups	.065	1	.065	.070	.793
	Within Groups	51.654	55	.939		
	Total	51.719	56			
Knowing that the social media post was generated by Artificial Intelligence, how would you rate the following variables? - I trust the brand	Between Groups	1.416	1	1.416	1.510	.224
	Within Groups	51.567	55	.938		
	Total	52.982	56			
Knowing that the social media post was generated by Artificial Intelligence, how would you rate the following variables? - I view the brand as authentic	Between Groups	5.576	1	5.576	5.227	.026
	Within Groups	58.670	55	1.067		
	Total	64.246	56			
Knowing that the social media post was	Between Groups	.128	1	.128	.136	.714

generated by Artificial Intelligence, how likely are you to purchase the product? - How likely are you to purchase this product?	Within Groups	51.802	55	.942		
	Total	51.930	56			

TABLE 3: Prompt 4 Difference in Means ANOVA Table

ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Knowing that the email was written by a human, how would you rate the following variables? - I trust the product	Between Groups	.487	1	.487	.565	.455
	Within Groups	47.407	55	.862		
	Total	47.895	56			
Knowing that the email was written by a human, how would you rate the following variables? - I trust the brand	Between Groups	.239	1	.239	.314	.577
	Within Groups	41.796	55	.760		
	Total	42.035	56			
Knowing that the email was written by	Between Groups	.798	1	.798	.636	.429

a human, how would you rate the following variables? - I view the brand as authentic	Within Groups	69.096	55	1.256		
	Total	69.895	56			
Knowing that the email was written by a human, how likely are you to purchase the product? - How likely are you to purchase this product?	Between Groups	.725	1	.725	1.168	.285
	Within Groups	34.152	55	.621		
	Total	34.877	56			

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