# LUISS

## Corso di laurea in Marketing: Customer engagement and relationship management

Consumer Behaviour

# The impact on consumers of different types of communication in the healthy food industry, and the role played by AI generated content

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# Abstract

This research tests how consumers' willingness to buy (WTB) of healthy food products is affected by a communication variable that brands could manipulate referring to language. In particular, the focus is on the differential effectiveness of emotional and informative language in advertisement to promote healthy food. The former leverages feelings such as joy and nostalgia, while the latter focuses on product attributes and health benefits. Moreover, this study focuses on how the use of artificial intelligence (AI) to generate advertising contents of the ads that can affect consumer's willingness to buy. Its integration as a moderator has the aim of understanding how consumers react to the new and rapidly evolving technology.

In sum, the objective of this thesis is to investigate conditions under which emotional or informative language is more effective in boosting consumers' willingness to buy (WTB) of healthy food products and whether the use of generative AI (and its disclosure to consumers) moderates this impact. The findings offer actionable insights for marketers, contributing to the broader academic discourse on marketing communications and AI integration, while also offering an overview on the history of food marketing and an analysis of the sector today.

# Chapter 1 - Introduction

The food industry stands as one of the most significant and necessary yet dynamic, interesting, and vibrant sectors globally, continually evolving in response to technological advancements, economic shifts and most importantly, changing consumer trends. Its complexity is not just in the multitude of products it offers but also in the intricate web of production, distribution, and marketing strategies that underpin its operations. The food business has seen a number of revolutionary innovations in recent years that have altered the connection between food companies and customers and revealed hidden aspects of consumer response and communication.

## 1.1 Trends in the food Industry

One of the most common trends in the industry, is certainly the growing consumer consciousness regarding health and wellness.[1] In recent years, consumers have become more aware of sustainability and health issues, and at the same time are increasingly linking food choice to lifestyles, and to health concerns. The demand for organic, natural, and non-GMO products, was already rapidly growing at the end of the 1990s[2], and has skyrocketed recently, pressuring food companies to review their product lines and advertising strategies accordingly.[3] Another trend, that carries an increasing social weight, is the increasing importance of sustainability, with consumers showing a preference for brands that demonstrate a commitment to environmentally friendly practices and social responsibility.[4]

In addition to health and sustainability, technological innovations have significantly impacted the food industry as well[5]. The rise of e-commerce and online delivery services

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[1] Witzel, J.A., (2015) Consumer perception and trends about health and sustainability: trade-offs and synergies of two pivotal issues. Current opinion in food science.
[2] Thompson, G.D., (1998), Consumer Demand for Organic Foods: What We Know and What We Need to Know. Academic journal of agriculture economics.
[3] Nechaev, V. (2018), Trends in demand on the organic food market in the European countries. Web of Conferences
[4] Khan, M. (2020), Consumer green behaviour: An approach towards environmental sustainability. Sustainable Development
[5] Fryer, P.J., Versteeg, C. (2008), Processing technology innovation in the food industry. Innovation: Organisation & Management

has changed how consumers purchase food, creating opportunities and challenges for food marketing and distribution channels. The emergence of new tech start-ups, offering everything from plant-based meat alternatives to meal-kit delivery services, has also disrupted traditional business models, making innovation a key competitive differentiator. The economic background of the food sector cannot be overstated in such a discourse. Businesses are fighting for market share in an industry where customer loyalty is as volatile as new food trends. Companies operate in a highly competitive environment, and as a consequence of this, big franchises like McDonald's, and large retailers, need to constantly adapt and evolve their brand identity. Globalization has expanded market boundaries, allowing for a diverse exchange of products but also greatly increasing competition, and companies nowadays must contend not only with local competition but with international brands, each bringing different strengths and approaches to the table. Within this context, the role of marketing and advertising becomes crucial. It is through these channels that food companies communicate value, differentiate their products, and build brand identities that resonate with consumers. The aim is to not only capture immediate sales but to foster long-term relationships that can overcome the shifts in consumer preferences and market dynamics. Emerging chains, like Honest Greens[6] in Spain and Portugal, or Oakberry[7], have built their identity around consumer trends, linking food and diet to lifestyle, and have succeeded.

Marketing in the food industry is very delicate; it requires a detailed understanding of consumer psychology, market trends, legal aspects, and the socio-cultural and geographic factors that influence eating habits. The nature of the sector too, being linked to vital and necessary aspects of human needs, makes it even more complex. Advertising, as a subset of marketing, has the ultimate goal of eliciting a positive response towards a product or brand. In the context of food, this often means not only highlighting the taste and quality of the product but also aligning it with the values and lifestyle aspirations of the target audience, something marketers struggle with constantly.

There are many different communication tactics used in food advertising. On one end of these, that is the focus of the present work, is emotional advertising, which aims to elicit an emotional response from the consumer, sometimes even to the point of not even using

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[6] https://www.honestgreens.com/en/our-story
[7] https://insideretail.com.au/business/how-acai-brands-like-oakberry-are-riding-the-wellness-wave-to-global-growth-202401

nor showing the product to the consumer. This can involve tapping into feelings of, for example, nostalgia, joy, or even social belonging. On the other end is informative advertising, which prioritizes the dissemination of product information, like focusing on ingredients, nutritional value, or price (Almadoss & He, 2010)[8]. In particular, emotional advertising, typically story-driven, appeals to consumers' feelings and aspirations, seeking to forge a deeper, affective connection with the brand. Informative advertising, on the other hand, provides consumers with factual information, emphasizing product benefits and nutritional value.

Studies indicate that emotional appeals in food advertising can significantly influence consumer preferences and behaviours. A report by the National Communication Association suggests that advertisements tapping into emotions such as happiness or nostalgia can enhance consumer engagement and brand recall.[9] Informative communications, conversely, play a critical role in an era where 77% of consumers aspire to make more health-conscious choices, as indicated by the annual survey from Innova Market Insights (2022)[10].

For instance, the messaging for a premium organic chocolate brand would differ significantly from that of a fast-food chain promoting a new burger. While the former may emphasize artisanal processes and sustainability, the latter might focus on taste, convenience, and price value, each tailoring their message to their audience's specific emotional triggers and informational needs. Some brands may also focus also on striking the perfect balance of emotional and informative communication. Following with the example of McDonald's, the American giant follows *glocal[11]* strategies, and tailors their advertising based on context, mixing both types of communication: informative and emotional.

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[8] Amaldoss, W., & He, C. (2010). Product variety, informative advertising, and price competition. Journal of marketing research

[9] National Communication Association, What is communication?

[10] Innova Market Insights (2022), Toward a healthy planet: Eco-conscious consumers practice what they preach.

[11] Svensson, G. (2001), "Glocalization" of business activities: a "glocal strategy" approach. Management Decision

*Figure 2 & 3 - Source: McDonald's*

The food business is a huge and diverse sector that is essential to both the infrastructure of society and global economy. The industry is dynamic, with a continually changing terrain due to a multitude of trends, problems, and innovations, and it is characterised by a complex web of production, distribution, and consumption.

In recent years, the industry has witnessed a big shift towards health-conscious, sustainable, and ethically produced food products. This evolution is driven by a more informed and discerning consumer base that demands transparency and quality. Indeed, the global organic food market size was valued at approximately $187.6 billion in 2021 and is expected to expand at a compound annual growth rate (CAGR) of 12.6% from 2022 to 2030, reaching $446.2 Billion.[12]

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[12] Fortune Business Insights, 2022 Market Research

**Europe Organic Products Market Size, 2018-2029 (USD Billion)**



54.38    61.67

2018  2019  2020  2021  2022  2023  2024  2025  2026  2027  2028  2029
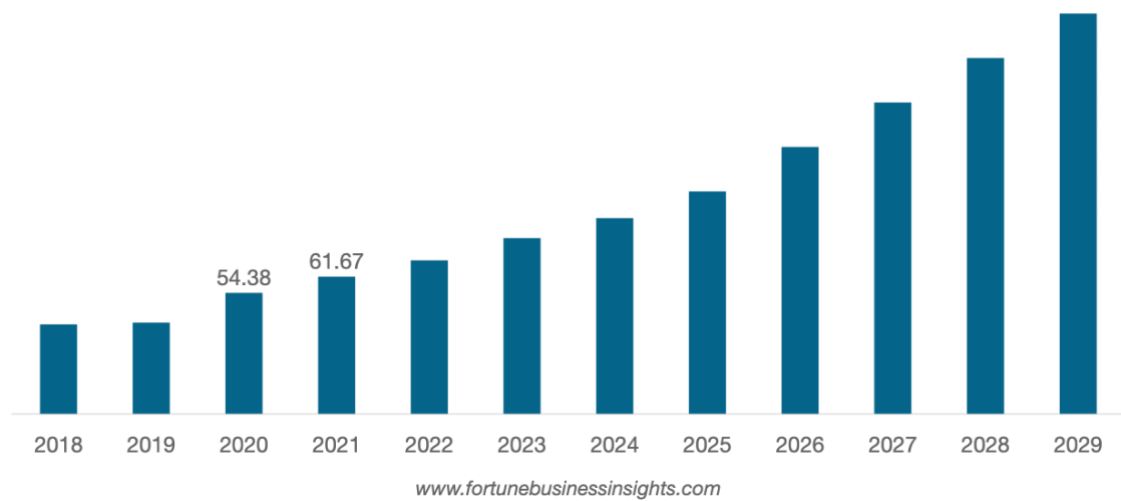
*www.fortunebusinessinsights.com*

*Figure 1 – source: Fortune Business insights*

Notably, the proliferation of plant-based alternatives highlights the industry's responsiveness to changing dietary preferences and environmental concerns. For example, the plant-based meat market is projected to reach $35.8 billion by 2027, growing at a CAGR of 15.8% from 2021 to 2027[13]. Additionally, the 'locavore' movement, advocating for the consumption of locally sourced food, has gained momentum, bolstering local economies and reducing carbon footprints.[14]

Digital transformation is another pivotal trend sweeping through the food industry. Online grocery sales, for instance, are expected to capture 20% of total market share by 2025, as per reports by the Food Marketing Institute and Nielsen.[15] This increase highlights the industry's rapid adaptation to e-commerce, influenced by technology and consumer demand for convenience and immediacy.[16]

Marketing and advertising, which, as said above, are vital tools for success in the food industry, have undergone their revolution too. In the digital age, food marketers leverage a mix of traditional media and digital platforms to engage with consumers. Social media, influencer partnerships, and content marketing are just a few channels that have become integral to promotional strategies, especially with the extremely fast-growing platform of TikTok.

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[13] Polaris Market Research, 2020
[14] Balzano, M., Vianelli D., (2022), What contributes to locavorism as a consumer ideology? British Food Journal
[15] dFood Marketing Institute and Nielsen. (2020). The Digitally Engaged Food Shopper.
[16] Amed, I. (2019), Now or never: Immediacy and customer experience in fashion retail

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## 1.2 Advertising and its intricacies

In the realm of advertising, communication takes on a strategic dimension, serving as a catalyst for every aspect of the brand, from image to identity to reputation and positioning, all passing through customer engagement, which is not simply intended as a quantitative action a consumer performs, but more as to what extent does a consumer effectively *take part* in the brand. The big question today is: is the brand part of the consumer's everyday life? To make that happen, in a world where one is bombarded with thousands of ads a day, and can process only a limited amount of data, attention is key. Advertising, in its many forms, seeks to capture the attention of audiences, present persuasive messages, and ultimately influence consumer behaviour. Whether it be through still in use print media (which is enjoying a new resurgence), television commercials, or digital marketing campaigns, advertisers employ a vast array of techniques to attract viewers and obtain desired responses.

At the end of the XX century and at the beginning of the XXI, many scholars started to understand what effect advertising has on the population, and why. W.M Weilbacher[17] interpreted advertising as nothing more than a net addition to everything the consumer had previously learned and retained about the brand. A point of view that, when taken, would completely shift advertising strategy, especially for well-known brands. Other researchers, D. Vakratsas and T. Ambler (1999)[18], concluded that "advertising effects should be studied in a space, with affect, cognition, and experience as the three dimensions, and that advertising's positioning in this space should be determined by context, which reflects advertising's goal diversity, product category, competition, other aspects of mix, stage of product life cycle, and target market." While it is certainly true, as was introduced earlier, that a context influences a message (and that every individual context is different), in advertising and communication in some sectors, and in some cases, clear results can be obtained relating to the use of different types of information that is sent, and specifically to how it is received, to better study strategies that have a bigger percentage of success.

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[17] Weilbacher W.M.(2003), How does advertising affect consumers? Journal of Advertising Research
[18] Vakratsas, D.,Ambler, T. (1999), How Advertising Works: What Do We Really Know? Journal of Marketing

The effectiveness of advertising, in fact, hinges not only on the content of the message but also (almost always) on its mode of delivery and reception. Communication is a reciprocal process involving both transmission and interpretation, and the sender of a message must carefully model it to resonate with the intended audience, taking into account cultural aspects, psychological triggers, and contextual factors, and ultimately in our case to influence the consumer's behaviour. Similarly, the receiver must actively decode the message, filtering out extraneous noise and discerning underlying meanings. However, in this incessant mix of advertising messages, coming from social media, OOH, radio, print and TV, consumers are targeted with a plethora of stimuli, making it increasingly challenging for brands to cut through, make their way and leave a lasting impression on their audience. Creating a long-lasting brand image, indeed, is even harder. Language, and the use of specific words, can be fundamental for understanding consumer response and lay out a communication plan or creative direction.

The use of language emerges as a strong instrument for shaping consumer perceptions and decisions. The discourse on persuasive linguistic manipulation, as shown by research such as Moiseeva (2020), unveils a complex environment where advertisers deploy sophisticated linguistic strategies to resonate with a diverse audience, creating messages that not only attract but also influence consumer behaviour.[19]

According to Farzaliyeva (2023), this intentional language manipulation is a planned use of "linguistic, semantic, and emphatic constructions rather than a random effort". These carefully selected and organised components highlight the complexities of message formation in advertising and its significant psychological influence on consumers.[20]

The discourse becomes more intriguing when analysing the ever-discussed ethical implications in advertising and marketing. Kulikova, Brusenskaya, and Kolesnikov (2021) make a contribution to this discussion by challenging the moral limits that separate manipulation from persuasion. Their approach sheds light on the moral obligations placed on advertisers to promote openness and truthfulness, supporting advertising strategies that respect consumers' autonomy and the right to make informed decisions rather than "hiding motives behind the pretence of persuasion."[21] The progression from

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[19] Moiseeva, A. (2020), On the persuasive linguistic manipulation in the text of advertisement. Russian Linguistic Bulletin

[20] Farzaliyeva, Z. (2023), Language elements affecting manipulation in advertising: linguistic, semantic, and emphatic elements. International Journal of Innovative Technologies in Social Science

[21] Kulikova, E., Brusenskaya, L., Kolesnikov, Y. (2021), Linguolegal Expertise of Advertising and Media Criticism as a Means of Manipulation Countermeasure in the Media Space (in the Light of Laws "On Advertising" and "On Protection of Consumer Rights")

informational to these manipulative advertising practices represents the move in the advertising business towards using psychological insights for greater *subliminal effect*, focusing on the subconscious aspects of consumer behaviour to induce responses that are nearly instinctive to marketing stimuli. The power of advertising language calls nowadays for an aware application that follows the ethical responsibility towards transparent and authentic communication, a factor that is always relevant with the evolution of new technology in advertising.

In this hypercompetitive marketing landscape, the distinction between emotional and informative communication emerges as a critical and increasingly important determinant of advertising efficacy by sector (or industry).

As was already noted earlier, emotional (also mentioned as 'hedonic') communication is characterized by its ability to evoke feelings and provoke instinctive and visceral responses. It taps into the subconscious mind of consumers, creating deep-seeded connections and fostering brand loyalty. By appealing to any kind of emotions, such as joy, nostalgia, or empathy, advertisers can offer their products a near subjective value, transcending utilitarianism and resonating with consumers on a profound emotional and 'vital' level.[22]

On the other hand, informative (also mentioned as 'rational') communication prioritizes the dissemination of factual information, highlighting product features, benefits, and attributes. While emotional appeals can capture attention and evoke immediate responses, informative messages provide rational justification, empowering consumers to make informed purchase decisions based on objective (not subjective) criteria, which, can be of incredible importance in an era where consumers want to know exactly what they are purchasing.

The interplay between emotional and informative communication is multifaceted, with each approach offering distinct advantages. In the context of the food industry, where sensory experiences usually reign supreme, the choice between emotional and informative communication becomes particularly important.

The exploration of utilitarian (informative) and hedonic (emotional) considerations in advertising by researchers like Tamir, Chiu, and Gross (2007) delves into the various ways

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[22] Stout, P. A., J. D., Leckenby (1985), Measuring Emotional Response to Advertising. Journal of Advertising

emotions are harnessed not just for their hedonic value but also for their utilitarian benefits.[23] Their study suggests that emotions, traditionally viewed through a hedonic lens, can also be strategically engaged to fulfil utilitarian goals, offering a broader perspective on the different roles of emotions in shaping consumer behaviour.

As aforementioned, when consumers navigate the infinite world of food choices, they are confronted with a myriad of marketing messages, craving for their attention and allegiance. Whether it's a heart-warming narrative about family traditions (see Edeka supermarket ads) or a detailed breakdown of nutritional content (Actimel), food advertisers must strike a delicate balance between emotional appeal and factual accuracy.
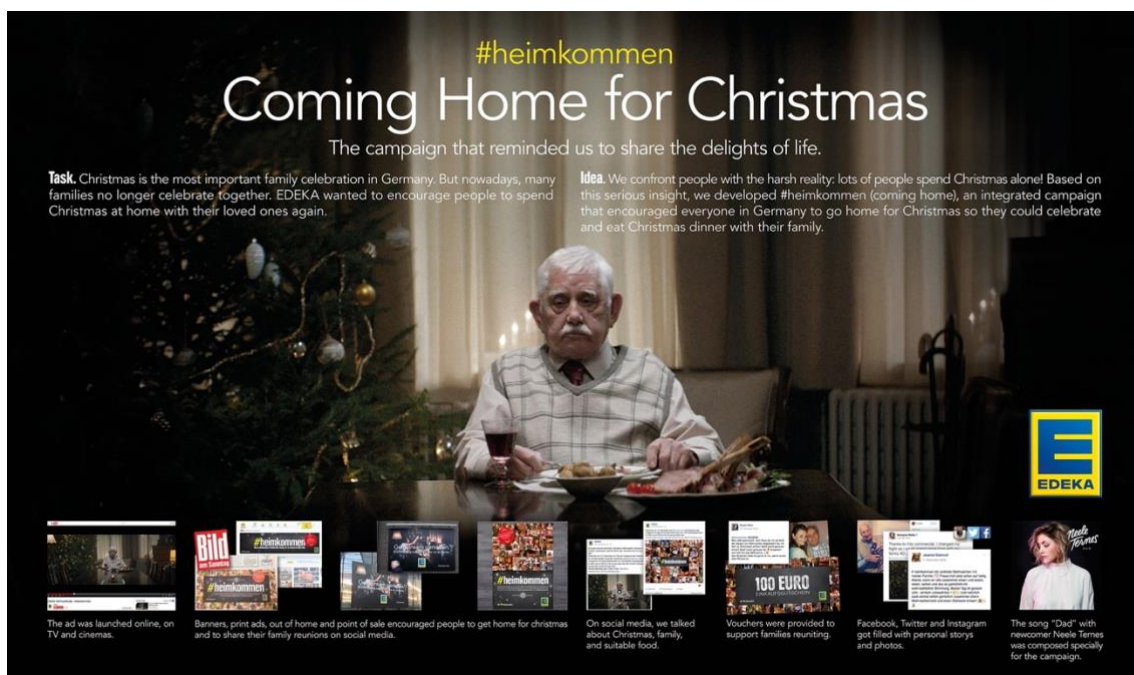


*Figure 4 - Source: Edeka*

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[23] Tamir, M., Chiu, C.-Y., & Gross, J. J. (2007). Business or pleasure? Utilitarian versus hedonic considerations in emotion regulation. Emotion

*Figure 5 - Source: Actimel*

## 1.3 Artificial Intelligence

The integration of artificial intelligence (AI) into marketing strategies represents the next frontier in this evolving landscape. AI's predictive capabilities and data-driven insights enable brands to personalize communication at an unprecedented scale. By analysing consumer data, AI can tailor marketing messages to individual preferences, potentially increasing the effectiveness of both emotional and informative advertising strategies. While AI can be used as a tool to gather insights, and personalise marketing messages, it can also be directly used in creative processes. With powerful generative AI (genAI) tools, like Open AI's DALL-E, Midjourney or Copilot, creating ads for digital marketing campaigns is quick, easy, and possibly quite effective. Companies have already started using genAI in for their campaigns, sometimes for directly creating the ad, sometimes by using AI's response to demonstrate the strength of a brand. (*see Figure 6 &* 7)

*Figure 6 - Source: Heinz Ketchup*



*Figure 7 - Source: sapporobeer.it*

In very recent years, the advent of AI has quite literally revolutionized the landscape of how we interact with the internet and has been changing advertising, introducing us to a new era of personalized communication. Advertisers can now optimize message resonance, maximize engagement, and ultimately enhance ROI, by tailoring and speeding up communication. Even more importantly (for consumers), AI, and especially generative AI, can be used in creative processes to generate images for campaigns (as shown above). However, as AI becomes increasingly integrated into advertising practices, ethical considerations arise regarding privacy, algorithmic bias, and especially transparency. The behavioural implications of AI-mediated communication demand careful scrutiny, as the stakes are high in an era of incredibly rapid speed of development in technology.

In light of these developments, it is important to examine the impact of emotional and informative communication in the food industry and the role of AI in shaping consumer perceptions and purchasing behaviour. By studying the interplay between human psychology, technological innovation, and marketing strategy, this research thesis seeks to shed light on the dynamic forces driving consumer decision-making in the digital age, and now, in the 'AI age'.

## 1.4 The importance of Communication

The core of advertising, and why it works, is related to the nature of mankind and its relationship with communication.

Communication is part of our success story as human beings. We communicate, as all animals, to survive. From cave paintings to cuneiform text, and from hieroglyphics to billboards, the story of communication is as old as the story of mankind. It is a history supported by two, equally important pillars: the process of sending information, and the process of receiving it. And, while the former one may give the idea of seeming active, and the latter passive, they are both active and incredibly quick actions we carry out in everything we do. It is, indeed, by all means, a two-way process of transmission of information, in forms that can be opinions, subtle messages, indirect meanings or ideas. There is always a sender, and a receiver, who encodes and decodes a message, which passes through tight channels, cutting through external noise.[24] But however tight, the noise always manages, in one way or another, to infiltrate and stain the message that is

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[24] National Communication Association, *What is communication?*

passing through the channel, creating, what is called, the *context*. A message, in fact, has to always be understood in the context in which it is sent, and even more importantly, received, and decoded. Communication, as the cornerstone of human interaction, has evolved through many ages, adapting to technological advancements and social shifts. From the first forms of speech of our ancestors to the sophisticated and greatly complex digital platforms of the modern era, the real core, remains unchanged: the transmission, reception, and interpretation of information. And every medium, whether verbal, written, or visual, serves as a channel for ideas, knowledge, evaluation and also instinctive emotion.

Throughout history, communication has played a central and fundamental role in cultivating connections, shaping civilizations, and spreading cultural heritage, even passing it on centuries later. The earliest forms of communication such as cave paintings and ancient scripts served not only as means of recording events but also as vehicles for storytelling, collective memory and opening people to new ways of thinking about the world.[25] These very early manifestations laid the bases for more elaborate systems of communication, paving the way for the development of language, writing, and eventually, today, mass media. And, while we have changed the means and artistry of communication, the core remains the same: we still want to tell and hear a story in the best way possible.


In order to comprehend the context and backdrop of this research it is crucial to review the key events in the food industry's history. A thorough foundation for the development of consumer engagement and brand strategies is provided by going through the history of the food business, food marketing, communication tactics, and advertising.

This historical perspective is fundamental for understanding the current dynamics and future directions of the food industry, especially in the realms of emotional and informative advertising.

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[25] McAnamy, E.G. (2012) Saving the world: A brief history of communication for development and social change. Communication Research

*Figure 8 - Source: Coca-Cola Company*

The industry's journey began with simple market transactions, evolving over centuries from local markets to global supply chains. Initially, food production and distribution were local and seasonal, with limited availability dictating consumption patterns. The Industrial Revolution marked a pivotal turn, introducing mass production and transportation that expanded access to food products beyond local regions, laying the groundwork for the modern food industry. This era also saw the advent of canned goods and processed foods, revolutionizing food preservation and availability[26].

Concurrent with these developments was the birth of *food marketing*. In the late 19th and early 20th centuries, as products became more widely available, the need to distinguish them in a growing market became apparent. Brands such as Coca-Cola and Kellogg's were among the first to employ branding and mass advertising strategies, utilizing catchy slogans and imagery that appealed to a broad audience. These strategies capitalized on print media, and later radio and television, to reach consumers nationwide, marking the early integration of emotional appeal in food advertising.[27]

Communication in the food industry has always been dynamic, adapting to technological advances and shifting consumer expectations. The language used in marketing and advertising evolved from straightforward product descriptions to more sophisticated

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[26] Steel, C. (2008). Hungry City: How Food Shapes Our Lives.
[27] Tedlow, R. S. (1990). New and Improved: The Story of Mass Marketing in America.

narratives that sought to evoke emotional responses. This shift was influenced by psychological research in the early 20th century, which underlines the power of emotional appeal in influencing consumer behaviour. Brands began to craft stories around their products, tapping into desires for comfort, nostalgia, and identity, which proved to be a strong mean of establishing brand loyalty.[28]

The history of advertising in the food industry reflects broader trends in marketing and societal changes. Post-World War II, the increasingly more complex consumer culture and television's rise as a dominant media form led to an explosion of food advertising. This period witnessed the dawn of the fast-food era and convenience products, with advertising campaigns emphasizing speed, ease, and the novelty of these offerings. The latter part of the 20th century introduced a more health-conscious consumer, prompting a shift in food advertising towards highlighting nutritional benefits and organic labels[29].



*Figure 9 - Source: davidbuckingham.net*

As already mentioned in this introduction, emotional and informative advertising strategies have long coexisted, each playing a unique role in consumer engagement. Emotional advertising seeks to connect with the audience on a personal level, leveraging feelings of joy, nostalgia, or belonging to build a relationship with the brand. Informative

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[28] Packard, V. (1957). The Hidden Persuaders.
[29] Pollan, M. (2006). The Omnivore's Dilemma: A Natural History of Four Meals.

advertising, contrastingly, focuses on conveying product attributes, health benefits, or price advantages, appealing to the consumer's rational decision-making process. The balance between these approaches has been a central theme in food advertising, with trends constantly swaying the preference from one to the other based on consumer sentiment and societal norms.[30]

In sum, the marketing landscape evolved by firstly being dominated by informative communication, a direct reflection of the rational decision-making model which presumed consumers made purchase decisions based primarily on the practicality and utility of products. This form of communication which focuses on the functional attributes and benefits of products has its roots in traditional marketing principles, which derived from classic economics, where consumers were viewed as rational actors, emphasizing product information and utility to appeal to the logical decision-making processes of consumers.[31] However, the emergence of emotional communication in marketing, marked a very big shift in communication and advertisement. This approach, which fosters brand loyalty and preference, recognized the limitations of purely rational appeals, especially in saturated markets.[32] Emotional marketing became more prominent in the latter half of the 20th century, as a consequence of saturation and crowded markets where brands had to seek differentiation by creating emotional connections with consumers and taking a strong position in their minds, in a world were differentiating on featural function was not enough anymore.

In the 21st century the digital transformation has ushered in unprecedented changes in how food is marketed and consumed. The rise of social media, influencer marketing, and data analytics has provided new lanes for engaging with consumers, allowing for a more personalized approach to advertising. The integration of artificial intelligence in marketing strategies could further refine the balance between emotional and informative communication, tailoring messages to individual consumer preferences and behaviours. The continuous adaptation and innovation in communication and advertising strategies underscore the industry's resilience and capacity to connect with consumers in ever-evolving ways.

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[30] Schor, J. B. (1998). The Overspent American: Why We Want What We Don't Need.
[31] Holbrook, O'Shaughnessy (1984), The role of emotion in advertising. Journal of Advertising
[32] Stewart, D.W., Morris, J., Grover, A. (2007), Emotions in Advertising. Journal of Advertising Research.

## 1.5 The importance of the Food Industry

In exploring the dichotomy between emotional and informative communication within the context of the food industry, it is crucial to understand the sector itself (in the present day) to dive deep into the evolution of these strategies and their impact on consumer behaviour, not only from an advertising point of view, but also in a broader sense.

The food industry, with its global expanse and regional peculiarities, stands as testimony to human civilization's progress and adaptation. This complex network that spans agriculture, manufacturing, and distribution has evolved significantly, shaped by technological advancements, cultural shifts, and economic developments. Historically rooted in the need to sustain growing populations, the industry's evolution from subsistence farming to industrial agriculture emphasizes the innovations in food production and preservation technologies. The advent of refrigeration in the 19th century, for instance, revolutionized the way food was stored and transported, leading to the globalization of the food supply chain. By the 20th century, the introduction of fast food and convenience products reflected changing lifestyles, particularly in urbanized Western societies, where quick and easy access to food became a staple of modern life.

Regionally, the food industry exhibits diverse characteristics, influenced by geographical, cultural, and economic factors. In Asia, for instance, rice and seafood dominate the dietary landscape, with countries like Japan and Thailand known for their rich culinary traditions that emphasize fresh, seasonal ingredients. Contrastingly, the Western diet, particularly in the United States and parts of Europe, has historically leaned towards higher consumption of meat, dairy, and processed foods, although recent decades have seen a growing trend towards plant-based diets and organic products. This shift is partly driven by increasing awareness of health and environmental issues, with the organic food market in Europe seeing a 125% increase in value over the last decade[33]. Furthermore, the rise of the middle class in emerging economies such as Brazil, India, and China has led to an increased demand for diverse and higher-quality food products, challenging the food industry to meet these new consumer preferences while balancing sustainability and affordability.

The food industry's regional differences also extend to agricultural practices and policies. In many African countries, where agriculture remains a key economic sector, challenges such as drought, soil degradation, and limited access to technology hinder food

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[33] European Commission. (2020). "The Organic Food Market in Europe: Trends and Developments."

production efficiency and sustainability. Meanwhile, in regions like North America and Europe, technological innovations in agriculture, including precision farming and genetically modified organisms (GMOs), have significantly increased crop yields and reduced labour costs, with ongoing debates about environmental and health impacts.

The development of the food industry is also marked by its response to global challenges, including climate change, population growth, and the recent COVID-19 pandemic. These factors have accented the importance of building resilient food systems that can withstand global shocks and natural events. For instance, the pandemic highlighted the vulnerabilities in the global food supply chain, prompting a re-evaluation of local versus global sourcing strategies and an increased focus on food security and sustainability.[34]

In sum, the food industry's journey is one of interesting growth and transformation, reflecting humanity's evolving relationship with food. From regional dietary habits to global supply chains, the industry continues to navigate a complex set of challenges and opportunities, with the aim of providing safe, nutritious, and accessible food for all.

The food industry provides a vivid illustration of the transition from informative to emotional communication, moving from early utilitarian messages about health, convenience, price and taste, to more emotive storytelling approaches adopted by brands such as Coca-Cola. The latter completely associated its products with happiness and togetherness, encapsulating experiences, memories, and identity in their advertising, to become the symbol of the 'innocent' archetype. This shift accentuates the evolving understanding of consumer behaviour, from viewing consumers as rational decision-makers to recognizing the profound impact of emotional appeals[35]. McDonald's, a chain that started by marketing its convenience and speed, had to change its strategy when other big fast-food changes started being established in worldwide markets. The brand started marketing itself with what it represented: happiness, good times, nostalgia, and fun. McDonald's decided to start communicating emotions, not information. However, as trends change, and society changes, brands have to keep evolving, and renew their messages. The chain then changed their strategy, made their logo green, and started to communicate freshness, goodness and health-related catchphrases and keywords, to adapt to consumer needs.

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[34] Nakat, Z., Bou-Mitri, C. (2021), COVID-19 and the food industry: Readiness assessment. Food control
[35] Meijboom, F., Višak, T., & Brom, F. (2006). From Trust to Trustworthiness: Why Information is not Enough in the Food Sector. Journal of Agricultural and Environmental Ethics

*Figure 10. source: McDonald's*

With the advent of AI in advertising, the food industry has witnessed a new era of quick, easy, accessible, and hyper-personalized communication. While fast food chains (like McDonald's) have always been criticized for their misleading menu item pictures, generative AI can bring a whole new dimension to food communication. Not only, AI's ability to analyse consumer data and predict preferences has introduced a new starting point for both informative and emotional communication, as demonstrated by AI-driven initiatives like Starbucks' Barista bot and Domino's Dom. These examples highlight AI's potential to deliver personalized content that resonates deeply with consumer desires, enhancing both the effectiveness and efficiency of marketing strategies.[36]

With further technological advancements, the integration of AI in marketing poses new challenges and opportunities. The critical factor of trust in AI-generated versus human-generated content has become increasingly relevant, and, as many studies have demonstrated the relation trust has with purchase intention or willingness to buy, understanding and navigating consumer trust is paramount in leveraging AI effectively within marketing strategies, especially in industries as essential and personal as food.

## 1.6 Relevance of the research problem

The relevance of this study is underscored by the growing importance of effective communication strategies in the highly competitive food market, where understanding the nuances that make communication strategies more effective in influencing purchasing decisions is of extreme importance. The increase in demand for protein-based nutritional and healthy food, and for clean label food, paired with the rising regulations limiting fortified food, growing inflation and raw material shortage, make the healthy food market very desirable but also challenging. This means that finding and creating a quality product

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[36] Sharma, S. et al. (2023). Ethical Considerations in AI-Based Marketing: Balancing Profit and Consumer Trust. Journal of Business Ethics

is not enough. Brands need to create strong identities and understand their target fully to communicate in the right way,[37]

The integration of AI into these strategies, which could be a big opportunity, introduces a new layer of complexity and potential, as highlighted by van Esch & Black (2021)[38] and Sharma et al. (2023)[39], necessitating a closer examination of its impact on traditional marketing paradigms.

In the context of the food industry, which is under the lens of this research, advertising plays a crucial role in influencing consumer choices and dietary habits. The rise of health consciousness, coupled with concerns about sustainability and ethical production, has heightened the need for effective communication strategies that resonate with consumers on both emotional and informative levels. According to a 2023 study by the American Psychiatric Association, newer generations (Gen Z, millenials), are the most worried about their health (75%)[40]. And, in a paper published in 2023, it was found that that GEN Y and GEN Z perceive healthy food habits and lifestyle as determining factors that lead on to influence purchase intention (Sarkar et al. 2023). More recent research too from GlobeScan's annual Healthy and Sustainable Living, discovered that younger generations are more likely to feel shame about living lifestyles that are unhealthy.[41]  Consumers might be driven to buy healthy choices not only due to conscious choices but also due to their familiarity with the brand and a positive emotional connection they feel towards it. Such repeated purchasing can evolve into brand loyalty, where consumers form both practical and emotional bonds with the brand (Elyria Kemp & My Bui, 2011)[42]. Indeed, brands significantly influence consumer buying decisions. Over time, as consumers' trust and loyalty grow, they tend to prefer brands that offer healthier food options, based on trust, rather than opting for newer companies in the market that may offer similar healthy products.

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[37] Data Bridge Market Research, (2023), Global Health and Wellness Food Market – Industry Trends and Forecast to 2030

[38] Van Esch, P., & Black, J. S. (2021). Artificial Intelligence (AI): Revolutionizing Digital Marketing.

[39] Sharma, S. et al. (2023). Ethical Considerations in AI-Based Marketing: Balancing Profit and Consumer Trust. Journal of Business Research

[40] American Psychiatric Association: '*According to results from a survey of 2,000 adults in the US (split evenly from Gen Z to baby boomers), Gen Z was the most worried about their health preventing them from experiencing everything they'd like to do in life (75 percent, versus baby boomers at 63 percent).*'

[41] Globescan (2023), compared to other peers*

[42] Kemp  E., Bui, M. (2011), Healthy brands: establishing brand credibility, commitment and connection among consumers. Journal of Consumer Marketing

As we now know, consumer purchasing decisions are not solely based on the objective value of a product; they are also significantly influenced by emotions evoked by advertising. Emotional communication can create a strong brand attachment and loyalty, which is vital in the highly saturated food market. Emotional communication can also link the consumer to a type of lifestyle that feels linked to his/her's, or that feels like something 'to obtain'. Informative communication, on the other hand, caters to the increasing demand for transparency, which was found to have increased by 15% to (72%) in 2022.[43]

The advent of artificial intelligence (AI) in marketing strategies represents a revolutionary step in how communication can tailor to individual consumers. As aforementioned, AI has a strong ability of analysing large datasets and predict consumer behavior which offers an unprecedented opportunity to enhance the personalization of marketing messages, but also eases the process of creating a communicative campaign. This raises the relevance of exploring how AI can fine-tune emotional and informative advertising to effectively increase consumer willingness to buy.

When Willingness to Buy (WTB) is utilized as a metric for marketing effectiveness, it is often observed to enhance the return on marketing investments. Understanding the factors that influence a customer's willingness to buy enables the crafting of marketing strategies tailored to effectively engage the target audience.

Beyond the commercial implications, it is important to repeat that the integration of AI into advertising communication poses significant social and ethical questions. As demonstrated by Swati Sharma et al. (2023), striking a harmonious balance between profit and consumer trust in AI-based marketing requires a proactive commitment to ethical principles. The ethical use of consumer data and the potential for manipulative messaging are all relevant concerns that this research aims to address. Academically, this study contributes to the broader conversation on marketing communications by offering new insights into the impact of AI on traditional advertising strategies. It extends current knowledge by exploring the synergy between emotional and informative communication through the lens of AI technology and in a specific sector, providing an understanding of its effectiveness in the food industry. Research on AI is very recent, and is as of now, not plentiful, especially in relation to research on emotional and informative communciation. Hence, this thesis aims to offer insights for the interplay between present and extremely

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[43] NielsenIQ (2022)

relevant trends, in behaviour and in technology. The objective, in sum, is to offer marketers and managers valuable insights on what kind of communication might be more useful in certain contexts and to understand if the use of AI may have negative (or positive) effects on different types of communication.

## 1.7 Literature

The body of literature exploring emotional and informative communication in advertising offers valuable insights into their effects on consumer behaviour. For instance, Nagano, Ijima, & Hiroya (2021)[44], while offering a different perspective, investigate the impact of emotional states (not the emotion of the ad) on the willingness to buy, finding that it only slightly mediates the effect; while Curtis, Arnaud, & Waguespack (2017)[45] research into how advertising affects consumer emotions, judgments, and purchase intention, finding that advertising may cause emotions that in turn increase WTB. Early investigations by Holbrook & O'Shaughnessy (1984)[46] established a foundational framework for understanding the role of emotions in advertising. Their work delineates the complex emotional processes elicited by advertising, proposing a model that emphasizes the multidimensional nature of emotions and their important role in mediating consumer responses to advertisements.

In relation to the previously mentioned trend of health and 'green' practices, Taufique (2020)[47] discovered that emotional ads find more affinity with consumers than informative ones, when relating to environmental purposes. Furthermore, while more specific, Puntoni (2009)[48], found that textual information expressed in a consumer's native language, can be received as more emotional. This is important when considering the nationality of the respondents of this study, and the language used. Further expanding on the intricacies of emotional advertising, Stewart, Morris, & Grover (2007)[49] provide empirical insights into how different emotional appeals, ranging from disgust and

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[44] Nagano, M., Ijima, Y., & Hiroya, S. (2021). Impact of Emotional State on Estimation of Willingness to Buy from Advertising Speech. Interspeech 2021

[45] Curtis, T., Arnaud, A., & Waguespack, B. P. (2017). Advertising Effect on Consumer Emotions, Judgements, and Purchase Intent. Asian Journal of Business Research, 7(2).

[46] Holbrook & O'Shaughnessy (1984), The role of emotion in advertising. Journal of Advertising

[47] Taufique, KMR. (2020), Integrating environmental values and emotion in green marketing communications inducing sustainable consumer behaviour. Jouurnal of Environmental Psychology

[48] Puntoni S. et al. (2009), Bilingualism and the Emotional Intensity of Advertising Language. Journal of Consumer Research

[49] Stewart, Morris, & Grover (2007), Emotions in Advertising. Journal of Advertising Research

happiness to surprise and fear, can influence consumer behaviour. Their findings highlight the critical role of matching the emotional content of advertisements with the intended audience's emotional dispositions, suggesting that the effectiveness of emotional appeals is contingent upon their ability to resonate with consumers' emotional states and preferences. The impact of communication on consumer food choices involves a variety of factors, including message content, consumer knowledge, and emotional responses. Verbeke (2008)[50] discusses how both emotional and informative factors influence food choices, underlining the importance of trust and personal relevance in communication effectiveness. The study suggests that knowledge and health motivations can significantly influence dietary behaviour, and that targeting and tailoring message to specific consumer needs can be more effective. More technical research determined the different effects of Hedonic vs Utilitarian banner ads on consumers, finding that whereas hedonic layouts engage brain areas associated with reward, self-relevance, and emotion, utilitarian banner ads trigger brain networks related to object identification and recognition, reasoning, executive function, and cognitive control (Casado-Aranda et al. 2022).[51]

The existing literature on communication in the food industry is extensive. Examining the dynamics of communication and advertisement in the food industry, especially concerning healthy food, reveals a multifaceted approach where technology, consumer behaviour, and marketing strategies intersect. Samoggia, Bertazzoli, & Ruggeri (2019) study the emerging trend of utilizing social media for health food promotion, observing how European retailers tailor their communication strategies on platforms like Twitter to engage with consumers about healthy eating habits. This digital evolution marks a significant shift from traditional advertising, underscoring the potential of online platforms to influence dietary choices.[52]

Simultaneously, the effectiveness of visual cues in advertising, particularly to younger audiences, is highlighted by Lagomarsino & Suggs (2018). Their study elucidates the preference of children for foods advertised using photos over cartoons, suggesting that realistic imagery might be more effective in promoting healthy food choices among

[50] Verbeke, W., (2008), Impact of communication on consumers' food choices. Appetite
[51] Casado-Aranda et al. (2022), Neural Responses to Hedonic and Utilitarian Banner Ads: An fMRI Study. Journal of Marketing Research
[52] Samoggia, A., Bertazzoli, A., Ruggeri, A. (2019), Food retailing marketing management: social media communication for healthy food. Journal of Business Research

children. This insight is very interesting for crafting advertising content that is both appealing and encourages positive dietary behaviours among youth. [53]

Exploring the bridging of marketing practices from less healthy to healthier food alternatives, Bublitz & Peracchio (2015) propose a framework that adapts the promotional tactics of hedonic foods to the marketing of nutritious options. This approach not only aims to shift consumer eating habits towards healthier choices but also offers a viable model for businesses in the health food sector to flourish, demonstrating the adaptability and potential for positive outcomes in food marketing. [54]

Furthermore, Amar, Gvili, & Tal (2020) introduce an innovative method to enhance the perception of food healthiness without compromising its appeal, using motion in visual advertising. This indirect form of communication effectively augments the attractiveness of healthy foods, offering a new tactic for social marketers aiming to push healthier eating practices among the general public[55].

There is also research that examines ethics and morals behind advertising practices. For example, the critical examination of television food advertisements by Adams, Tyrrell, & White (2010) further contributes to understanding how food is presented in a 'healthy' context to children, raising questions about the nutritional quality of foods advertised during children's peak viewing times. Their findings suggest the need for more responsible advertising practices that genuinely represent the healthiness of food products, emphasizing the role of media in shaping children's food preferences[56]

But diving deeper into the type of communication, some studies relating to the food industry, find that emotional communication is not always preferred to informative communication. Fels (2016)[57] for example, studied young adults specifically, and demonstrated that emotional appeals in advertising might not significantly sway young adults' purchase intentions in the food retailing industry, as these consumers prioritize rationality over affect. This mentioned research provides a critical examination of advertising effectiveness and consumer expectations, suggesting that young adults value

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[53] Lagomarsino, M., L. Suggs, L., (2018), Choosing Imagery in Advertising Healthy Food to Children. Appetite

[54] Bublitz, G., Peracchio, L., (2015), Applying industry practices to promote healthy foods: An exploration of positive marketing outcomes. Journal of consumer affairs

[55] Amar, M., Gvili, Y., & Aner Tal (2020), Moving towards healthy: cuing food healthiness and appeal. International Journal of Social Marketing

[56] Boyland & Halford(2010), Do television food advertisements portray advertised foods in a 'healthy' food context? Appetite

[57] Fels (2016), The Use of Emotional Advertising in the Food Retailing Industry for Targeting Young Adults. Universidade Catolica Portuguesa

high-quality products, ethical considerations, and positive shopping experiences over emotional appeals. This research is in partly also confirmed by Drolet et. al (2007)[58], that studied age-related differences in response to emotional vs informative ads and discovered that while consumers over the age 65 almost always preferred emotional ads, young adults (18-25), preferred emotional ads only for hedonic products, while favouring informative ads for utilitarian products.

While the literature offers insights and perspective regarding various types of communication, different food products and consumers' reaction to their manipulation, this research can contribute by further observing the interaction of the language in communication and AI.

While the literature on AI is not extensive, some recent studies have shown interesting results. AI technologies enable the analysis of vast datasets to identify patterns in consumer behaviour, predict future trends, and personalize advertising content, which may enhance both emotional and informative communication strategies, making them quicker, cheaper, and easier to produce (van Esch & Black, 2021). As already mentioned however, AI could have a negative effect on consumer trust, and Swati Sharma et al. (2023), found it to be very interlinked with the following of ethical practices. While taking on a more technical perspective, Chidinma-Mary-Agbai (2020)[59] highlights the transformative role of AI in the food sector, highlighting how its applications streamline operations from supply chain management to consumer preference prediction.. Indeed, Annabelle M. Wilson et al. (2017)[60], by presenting a practical model for enhancing consumer trust in the food industry, identified key strategies such as transparency and credibility as linked to trust. And, as found by Lin (2010)[61], trust has a positive effect on consumer's WTB. A 2023 study by Frank et al[62], also gave interesting answers regarding the use of AI and trust, specifically focusing on the degree of autonomy of the AI, finding that consumers trust AI more when they trust the company. Finally, a crucial study

[58] Drolet et. al (2007), Age-related differences in responses to affective vs. rational ads for hedonic vs. utilitarian products. Psychology and Aging

[59] Chidinma-Mary-Agbai (2020), Application of artificial intelligence (AI) in food industry. *GSC Biol. Pharm. Sci*

[60] Annabelle M. Wilson et al. (2017), A model for (re) building consumer trust in the food system. Health Promotion International

[61] Lin (2010), The influence of corporate image, relationship marketing, and trust on purchase intention: the moderating effects of word-of-mouth. Journal of business research

[62] Frank, D.A. (2023), In companies we trust: consumer adoption of artificial intelligence services and the role of trust in companies and AI autonomy. Journal of Business Research

conducted by Zhang (2022)[63], shows the effects AI design has on consumers. Interestingly, consumers are more willing to buy AI designed products than professional-designed ones, due to curiosity. However, it shows that this effect is lower when dealing with hedonic products.

Coffin's (2022) exploration into the ethical questions surrounding AI advertising calls for a deeper dialogue among stakeholders, emphasizing the importance of continuous scrutiny and ethical considerations in leveraging AI's capabilities.[64] Wu and Wen's (2021) investigation into consumer perceptions of AI-generated advertisements emphasises the dual role of "perceived objectivity and machine heuristic" in fostering appreciation for AI-created content, suggesting that transparency and the humanization of AI are crucial for consumer acceptance.[65] Furthermore, Baek's (2023) discussion on the future of digital advertising in the age of generative AI presents an expansive view of AI's impact, from virtual influencers to privacy concerns, indicating a wide array of challenges and opportunities.[66]

Incorporating AI into advertising within the food industry is not just about optimizing operational efficiencies; it's also about redefining creative processes and enhancing personalization to connect more deeply with consumers. Research such as the one conducted by Matthews and Fastnedge highlights how AI-generated imagery can introduce a new level of creativity and effectiveness in advertising campaigns, suggesting a significant shift in how brands conceptualize and execute their advertising strategies. Participants in this study showed excitement but also concern about DALL-E 2, and revealed a sense of inevitability for a change in the future of creative roles, as genAI advances and is adopted into agency workflows[67].

Meanwhile, Mogaji, studies the factors leveraging AI to tailor emotionally resonant advertisements, emphasizing the technology's potential to craft messages that resonate on a more personal and emotional level with consumers. This personalized approach is particularly pertinent in the context of healthy food marketing, where connecting with consumers' values and emotions can significantly impact purchasing decisions.

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[63] Zhang, H. (2022), Consumer reactions to AI design: Exploring consumer willingness to pay for AI-designed products. Psychology & Marketing

[64] Coffin, J. (2022). Asking Questions of AI Advertising: A Maieutic Approach. Journal of Business Ethics

[65] Wu, L., & Wen, T. (2021). Understanding AI Advertising From the Consumer Perspective. Journal of Advertising

[66] Baek, T. (2023). Digital Advertising in the Age of Generative AI. Journal of Advertising

[67] Matthews, J.(2023), The future of advertising campaigns: The role of AI-generated images in advertising creative. Journal of Advertising Research

The work by Campbell, Plangger, and Sands, underscores the ethical and trust-related challenges inherent in the use of genAI technologies in advertising, and a strong concert for deep-fake images, especially in digital marketing. Their research offers a framework for anticipating and addressing consumer responses to AI-manipulated advertising content, which the authors call *synthetic ads,* highlighting the importance of maintaining authenticity and ethical standards in the use of AI. This study is incredibly important for understanding perception of verisimilitude of consumers for sophisticated AI manipulation. This is especially important because the genAI's capabilities and advancement are improving at an incredible speed.[68]

Together, these studies enrich the understanding of AI's role in advertising, from enhancing creative processes and personalization to navigating the ethical considerations of AI-generated content. They underline the necessity for advertisers in the food industry to harness AI's capabilities thoughtfully, ensuring that advancements in technology align with ethical practices and genuine consumer engagement.

## 1.8 Research Gap & Question

As just seen, several factors that can be manipulated in brand communication within the food industry have been studied extensively, including aspects such as brand imagery, messaging tone (Puntoni 2009), and consumer engagement. Previous research has partially addressed the comparison between emotional and rational (informative) communication, showing that both approaches can influence consumer behaviour under different contexts (Fels 2016). However, it remains unclear which type of communication, emotional or rational, is more effective specifically within the realm of healthy food products. To address this gap, this study aims to investigate the moderating effect of AI disclosure, a contemporary and increasingly important tool in communication strategies. By examining how AI influences the effectiveness of emotional versus rational advertising, this research seeks to provide clearer insights into the optimal communication approach for promoting healthy food products.

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[70] Campbell, C. (2022), Preparing for an Era of Deepfakes and AI-Generated Ads: A Framework for Understanding Responses to Manipulated Advertising. Journal of Business Ethics.

Indeed, Despite the extensive research on emotional versus informative communication, there is no specific literature on consumer response to these different types of stimuli in the healthy food industry, an everchanging and saturated sector, that has the constant need to explore new strategies to capture consumer interest. Furthermore, not much research has been done on the use of AI in marketing the food industry and on consumer response to AI made campaigns. While AI applications in marketing are growing, their comparative effectiveness against the perception of human-generated campaigns in the context of emotional and informative advertising is still under-researched. This presents a significant research gap, as understanding the influence of AI could be pivotal for marketers aiming to optimize advertising strategies in the highly competitive food sector. Therefore, the primary research question driving this thesis is:

*Under which condition is it more effective to use emotional vs. informative language to boost consumers' Willingness to Buy of healthy food products? Is Ai playing a moderating role in the impact of emotional vs. informative language on Willingness to Buy?*

In detail, this study will explore the main effect of the type of communication strategy on WTB and investigate the potential moderating role of AI.
The answers to these questions aim to fill the identified research gaps and potentially offer actionable insights for marketers in the food industry on the effective integration of AI into advertising strategies.

## 1.9 Structure

Drawing on foundational studies such as those by Holbrook & Batra (1987) and Stewart, Morris, & Grover (2007), this thesis then lays the basis for a dive into the world of communications within the food industry, with a special focus on the emergent role of AI, and it sets the stage for an empirical investigation into the effects of emotional versus informative content on consumer willingness to buy (WTB).
The structure of the research will follow that of a scientific study. The conceptual development and theoretical framework segment will delineate the 'theoretical pillars' upon which the research hypotheses rest. A thourough literature review will clarify the established dichotomy of emotional and informative appeals in advertising, and how AI

may influence and reframe this dichotomy, and two main hypotheses will be formulated for the two effects: the one of the IV on DV, and the impact of the moderator.

In the methodology section, the technique of this study will be evidenced through the use of tools such as Qualtrics for survey implementation and SPSS for statistical analysis. The chapter will explain the operationalization of variables and the justification for chosen analytical methods, to evaluate the proposed model. A section on pre-tests will also be included to ensure the validity and reliability of the instruments used to measure the constructs, and all the used scales are already validated and taken from external research.

After discovering the results, and checking whether the hypohtheses are validated, a holistic discussion will synthesize the findings, outlining theoretical contributions, and delineating clear managerial implications for the food industry. This comprehensive dialogue will highlight both opportunities and challenges for marketers, and expand understanding on how AI could be used. This section will also include limitations of this study and suggestions for future research.

# Chapter 2 - Conceptual development & theoretical framework

This research is structured around the formulation of two hypotheses: the first of which particularly focusing on the differential effectiveness of using different language to promote healthy food purchase. In particular, the focus is on the language dimension that refers to emotional (hedonic) and informative (utilitarian) language used to promote healthy food. As we said, consumer markets become increasingly saturated, the ability to sway consumer willingness to buy (WTB) through effective communication is fundamental. The initial aim is to dissect and evaluate the literature analysed in the previous chapter and further literature, drawing insights on how these two distinct communication strategies affect consumer behaviour in the context of healthy food products.

Moreover, this section establishes a fundamental understanding of the theories behind consumer reactions. It also explores how artificial intelligence (AI) is transforming advertising strategies beyond graphic creation. AI's role in improving the dynamics of communication and consumer willingness to buy (WTB) is critical, and the goal is to then develop the second hypothesis that accurately reflects the influence of these factors on consumer behaviour.

## 2.1 Variables

At the core of the investigation lies the independent variable (IV), categorized into two distinct communication strategies: Emotional and Informative communication. As mentioned, multiple times throughout this research, emotional communication endeavours to evoke feelings, tapping into consumers' subconscious to elicit instinctive and visceral responses that foster a deep-seeded connection with the brand. It transcends utilitarian benefits, offering subjective value that resonates on a profound emotional level. Conversely, Informative communication is anchored in utilitarianism, providing tangible data about product attributes, benefits, and functionalities, appealing to the rational decision-making facets of consumers.

The focal point of this analysis, however, and the determinant of the behavioural nature of consumer research, is the Willingness to Buy (WTB) among consumers, particularly

concerning these healthy food products. WTB serves as a gauge for consumer behaviour, measuring the likelihood that the communication strategies employed will lead to a favourable purchase decision. This investigation aims to uncover which type of communication (i.e. emotional vs informative) holds a greater sway in enhancing consumer WTB in the realm of healthy food.

The moderating variable in this dynamic is the use of Artificial Intelligence (AI), specifically generative AI (genAI) in communication and advertisement creation. AI's role in advertising introduces a new layer of complexity, offering the potential to personalize content like never before and forge direct connections between brands and consumers. AI's capacity to analyse vast datasets allows for the creation of highly targeted and emotionally resonant advertisements. However, the effect that wants to be studied is the consumer reaction to advertisement content, which is created with the use of genAI, potentially moderating the relationship between the IV (Emotional vs. Informative Communication) and DV (WTB).

Dissecting the mechanisms through which emotional and informative communication strategies impact consumer willingness to buy and assessing AI's potential to amplify (or decrease) these effects, is crucial for constructing a robust foundation for the research hypotheses. These hypotheses will encapsulate predictions about the interplay between communication strategies, consumer behaviour, and the transformative influence of AI in advertising.

The exploration will navigate through works piecing together evidence to support the formulation of informed hypotheses.

## 2.2 Literature for H1

Emotional or hedonic communication leverages affective appeals to generate a direct emotional response from consumers. Holbrook and Batra (1987), whose study was mentioned in chapter 1, argue that emotions serve as critical mediators in the consumer's response to advertising, impacting both attitudes toward the ad and subsequent behavioural intentions.[69] Emotional appeals, by resonating on a visceral level, can effectively enhance consumer engagement and WTB by appealing to universal human

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[69] Holbrook, M. B., & Batra, R. (1987). Assessing the Role of Emotions as Mediators of Consumer Responses to Advertising. Journal of Consumer research

experiences and desires, such as happiness, nostalgia, and empathy. Studies have shown that advertisements that elicit strong emotional reactions can significantly increase consumer recall, brand recognition, and, crucially, the likelihood of making a purchase. Kemp, Bui, and Chapa (2012) demonstrate that emotional advertising is particularly effective in managing consumer emotions, thus influencing their purchase decisions in a manner that often surpasses the capabilities of informative messages.[70] Research by Niazi, Siddiqui, Alishah, and Hunjra (2012) underlines the significance of emotional attachment in driving consumer behaviour. Their findings consider a moderate relationship between emotional response and consumer buying behaviour, reinforcing the idea that brands capable of establishing an emotional connection are more likely to influence purchase decisions. This study marks the power of emotional appeals in transcending only product attributes to foster brand loyalty and increase WTB.[71]

Çinar (2020) investigates the effect of consumer emotions on online purchasing behaviour, finding that both positive and negative emotions significantly impact buying frequency. This study elaborates on the dual nature of emotions in e-commerce settings, where positive emotions enhance purchase frequency, while negative emotions deter it, highlighting the nuanced influence of emotional advertising online.[72] Other research shows the importance of both types of communication. Bondarenko, Vasiuta, and Pisarenko (2021) address the influence of marketing communications on consumer behaviour, emphasizing the tri-fold impact of informational, emotional, and behavioural aspects. Their research points to the critical role of integrated marketing communications in effectively influencing consumer behaviour through a blend of emotional engagement and information dissemination.[73]

Goh, Heng, and Lin (2013) explore the impact of 'user and marketer' generated content in social media brand communities on consumer purchasing behaviour. Their research provides valuable insights into how both emotional and informative content shared within social media platforms can enhance consumer engagement and influence purchase

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[70] Kemp, E. A., Bui, M., & Chapa, S. (2012). The role of advertising in consumer emotion management. Journal of Advertising

[71] Niazi, G. S. K., Siddiqui, J., Alishah, B., & Hunjra, A. I. (2012). Effective Advertising and its Influence on Consumer Buying Behavior. Information Management and Business Review

[72] Çinar, D. (2020). The Effect of Consumer Emotions on Online Purchasing Behavior. Journal of Retailing and Consumer Services.

[73] Bondarenko, V., Vasiuta, V., & Pisarenko, K. (2021). Role of marketing communications in consumer behavior. Marketing and Management of innovation. Marketing and Management of Innovations.

expenditures, demonstrating the significant role of digital environments in modern advertising strategies.[74]

On the other hand, research on informative or utilitarian communication, which focuses on delivering concrete, factual information about a product or service, aiming to enlighten the consumer about its features, benefits, and potential utility, show the benefits related to the products that need to be marketed. This form of communication appeals to the rational, decision-making processes of consumers, providing them with the necessary information to make informed purchase decisions. Ackerberg (2003) highlights that informative advertising plays a crucial role in experience goods markets, where consumers learn about product quality through consumption over time. Informative ads can mitigate uncertainty and reduce perceived risk associated with purchasing new or unfamiliar products.[75]

However, the effectiveness of informative communication relative to emotional appeals in influencing WTB varies across product categories and individual consumer preferences. The literature suggests that while informative advertising is essential for products requiring a high degree of consumer education, emotional appeals may yield greater impact in markets where differentiation is less about tangible attributes and more about brand identity and consumer lifestyle.

A study by Tsai & Honka (2019) focuses primarily on informative communication. It discusses informational versus non-informational content in advertising and highlights how informational content increases aided awareness and purchase intentions, conditional on consideration. This suggests that informative advertising effectively moves consumers along the purchase funnel by increasing awareness and potentially influencing willingness to buy.[76] Smith (1999) implies that emotional advertising has the potential to preserve or even enhance willingness to buy in the face of less favourable direct product experiences by influencing brand attitudes and consumer emotions.[77] More findings on emotional communication, by Nasco & Bruner (2008), demonstrate that emotional

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[74] Goh, K. Y., Heng, C. S., & Lin, Z. (2013). Social Media Brand Community and Consumer Behavior: Quantifying the Relative Impact of User- and Marketer-Generated Content. Journal of Marketing

[75] Ackerberg, D. A. (2003). Advertising, Learning, and Consumer Choice in Experience Good Markets: An Empirical Examination, Journal of marketing research. Journal of Marketing Research

[76] Tsai,Y., Honka , E. (2020), Informational and Non-Informational Advertising Content. Jounal of Marketing Research

[77] Smith, R.E. (1993), Integrating Information from Advertising and Trial: Processes and Effects on Consumer Response to Product Informatio. Journal of Marketing Research

advertising. might be more memorable or impactful, thereby affecting willingness to buy.[78] This theory is also supported by Komar's (2016) study, that shows how emotional advertising might work by engaging consumers on both emotional and cognitive levels, which could, in turn, influence their willingness to buy.[79]

Existing studies indicate a complex interplay between emotional and informative communication strategies in shaping consumer behaviour. While emotional appeals are good for creating strong brand connections and eliciting immediate consumer responses, informative communication provides a foundation for long-term consumer education and engagement. The balance between these strategies can significantly influence consumer WTB, particularly in the health-focused food sector, where both emotional and rational appeals can drive decision-making.

Building on this enriched literature review, the development of Hypothesis 1 will be grounded in the assertion that emotional communication, given its profound impact on consumer attachment and engagement, will likely demonstrate a stronger positive effect on WTB compared to informative communication.

## 2.3 Hypothesis 1

**H1**: Emotional (hedonic) communication in advertising will have a more significant positive effect on consumer willingness to buy healthy food products compared to informative (utilitarian) communication.

This hypothesis is underpinned by the understanding that emotional appeals in advertising, by virtue of their ability to evoke feelings and provoke instinctive responses, can transcend the sole provision of product information. Emotional communication taps into the subconscious mind of consumers, creating connections and fostering brand loyalty, which in turn, enhances WTB. In the case of healthy food specifically, consumer lifestyle aspects, which are more linked to emotional communication, are crucial in consumer purchase behaviour. Studies mentioned, such as those by Holbrook and Batra (1987), Kemp, Bui, and Chapa (2012), and Niazi et al. (2012) lend empirical support to

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[78] Nasco, G.C. Burner, S. (2008), Comparing consumer responses to advertising and non-advertising mobile communications. International Journal of Mobile Marketing

[79] Komar, S. (2016), The Effects of Verbal and Non-Verbal Features on the Reception of DRTV Commercials, Journal of Marketing Communications

this notion, suggesting that emotional appeals can offer subjective value that resonates with consumers on a profound emotional level, thereby influencing their purchasing decisions more effectively than informative messages.

Furthermore, the integration of findings from Goh et al. (2013) and Çinar (2020) reiterates the influence of social media and online platforms in amplifying the effects of emotional communication. The digital environment offers unique opportunities for brands to engage consumers with emotionally resonant content, which can be also more targeted, further bolstering the argument for the superior impact of emotional communication on WTB. Moreover, Smith (1999), Nasco & Bruner (2008) and Komar (2016) all demonstrated the positive impact of emotional advertising on consumers.

In contrast, while informative communication provides valuable insights into the product's attributes and benefits, appealing to the rational decision-making process of consumers, its direct impact on WTB, especially in the context of healthy food products, may not be as pronounced. Tsai & Honka (2019) highlights how informative content may aid awareness, and consequently increase WTB. However, the rational appeal of informative messages, though crucial for informed decision-making, may lack the visceral impact and emotional engagement elicited by hedonic messaging.

Other research, like the previously mentioned Drolet et. al (2007), covered differences in preference based on age related differences, which will not be covered in detail in this research.[80]

## 2.4 Literature for H2

Research on AI, and especially genAI, is not quite as plentiful as the literature for the first effect. GenAI has become accessible and widely available to mass users since 2020. However, some research can give some very interesting and useful insights on content creation with AI, and the relationship between consumers and the technology.

Wu and Wen (2021) provide an insightful examination of how AI-generated advertisements are perceived by consumers. Their study reveals that the perceived objectivity in the advertisement creation process, afforded by AI, enhances machine

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[80] Drolet (2007), Age-related differences in responses to affective vs. rational ads for hedonic vs. utilitarian products

heuristic beliefs, increasing consumer appreciation for AI-created advertisements. This underscores the potential of AI in crafting advertisements that are both effective and trustworthy from the consumer's perspective, suggesting a positive impact on the consumer's willingness to buy.[81] And, Levy (2012) found that the positive evaluation of an advertisement has a positive effect on WTB.[82] An interesting study by Arango, Singaraju, and Niininen (2023) investigates consumer responses to AI-generated images in charitable giving advertisements. The findings suggest that while AI-generated content can sometimes lead to scepticism or reduced empathy, ethical motives' saliency can counteract these effects, highlighting the important role of AI in advertising content creation and its potential implications on consumer behaviour.[83] Baek's (2023) very relevant study discusses the broad implications of generative AI, like ChatGPT, on digital advertising. The exploration into future trends in advertising suggests that AI's ability to produce highly personalized and creative content could significantly impact consumer engagement and behaviour, offering a fresh perspective on the transformative power of AI in the advertising domain.[84] Singh (2023), instead, dives into personalization aspects of AI, studying the integration of AI in eCommerce advertising, emphasizing how technologies like machine learning enhance personalization. This level of tailored advertising, powered by AI's analytical capabilities, suggests a direct pathway to influencing consumer purchasing decisions by aligning with individual preferences and behaviours more accurately.[85]

Insights from the Chinese advertising market are offered by Qin and Jiang (2019), highlighting how AI technologies are applied throughout the advertising process to meet growing e-commerce demands. Their observations suggest that AI enhances efficiency across consumer insight discovery, ad creation, media planning, and ad impact evaluation, reshaping the traditional advertising process to be more synchronized and efficient; but not mentioning genAI content.[86] Similarly, Peng, Wang, and Huang (2020) compare AI and statistical systems in predicting consumer behaviour, emphasizing AI's potential in offering more accurate marketing techniques through consumer behaviour prediction

[81] Wu, L., & Wen, T. (2021). Understanding AI Advertising From the Consumer Perspective. Journal of Advertising

[82] Levy S. & H. Gendel-Guterman (2012). Does advertising matter to store brand purchase intention? A conceptual framework. Journal of Product and Brand Management

[83] Arango, L., Singaraju, S., & Niininen, O. (2023). Consumer Responses to AI-Generated Charitable Giving Ads. Journal of Marketing research

[84] Baek, T. (2023). Digital Advertising in the Age of Generative AI. Journal of Adveritising

[85] Singh, N. (2023). AI-Driven Personalization in eCommerce Advertising.

[86] Qin, X., & Jiang, Z. (2019). The Impact of AI on the Advertising Process: The Chinese Experience.

(CBP). This aligns with the notion that AI-generated campaigns can more precisely target and influence consumer purchasing behaviours. [87]

The already mentioned Van Esch and Black (2021), on the other hand, explore how AI is revolutionizing digital marketing, from content creation to customer experience management. Their analysis points to the significant potential of AI in enhancing advertising effectiveness and ethical considerations, suggesting that AI-generated campaigns could effectively influence consumer WTB while navigating ethical implications.

Furthermore, AI generated images could be seen by viewers as non-realistic, due to the possibility of inaccuracy. A study by Kim (2019) discovered that non-realistic images in advertisements, such as digital illustrations or animations, can significantly affect product evaluation. They tend to suppress consumers' mental simulation of using the products and increase uncertainty in judging the products' characteristics, leading to an attenuated judgment of the products' benefits and drawbacks.[88] Crilly (2004) also found that the aesthetic, semantic, and symbolic aspects of products' visual form can significantly influence consumer response, with emphasis on the cognitive and affective responses to design.[89] Another very interesting study by Loebnitz (2021), found that consumers that dislike food brands that are not perceived as authentic, increase their purchase intention of the brand when its advertising is paired with 'authentic' (& emotional) images.[90]

The use of AI can also alter the traditional dynamics of advertising by potentially diminishing the impact of emotional communication. Kashive, Powale, & Kashive (2020) explored user perceptions of AI in enhancing personal learning, which could translate to advertising where AI might shift focus from pure emotion to utilitarian communication by providing tailored, informative content.[91] Other studies Hwang & Won (2022) highlight how AI-generated content can provide a balance of informative and emotional appeal that might equalize the persuasive power of both communication types.[92]

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[87] Peng, C.-C., Wang, Y.-Z., & Huang, C.-W. (2020). Artificial-Neural-Network-Based Consumer Behavior Prediction: A Survey. 2020 IEEE

[88] Kim, K., Choi, J., Wakslak, C.J. (2019), The Image Realism Effect: The Effect of Unrealistic Product Images in Advertising. Journdal of consumer research

[89] Crilly, N., Moultrie, J., Clarkson, P. (2004), Seeing things: consumer response to the visual domain in product design. Design Studies

[90] Loebnitz, N., Grunert, K.G. (2021), Let us be realistic: The impact of perceived brand authenticity and advertising image on consumers' purchase intentions of food brands.

[91] Kashive, N., Powale, L., Kashive, K., (2020). Understanding user perception toward artificial intelligence (AI) enabled e-learning. International Journal of Educational Technology

[92] Hwang, A., Won, A. (2022). AI in Your Mind: Counterbalancing Perceived Agency and Experience in Human-AI Interaction. Chi conference on human factors in computing systems extended abstracts

This technology can also influence cognitive biases in decision-making. Rastogi et al. (2020) discuss how AI-assisted decision-making can address cognitive biases, such as the confirmation or anchoring bias, suggesting that AI in advertising could potentially neutralize the innate bias toward emotional communication by providing data-driven, informative content that appeals to rational decision-making.[93]

Discussions on the food industry and the use of artificial intelligence conducted by Herwig et al. (2016) analysed neural activations related to healthiness evaluations of food, implicating areas of the brain associated with reward and self-relevance. AI's ability to process and present health information effectively may leverage these neural mechanisms differently than emotional appeals alone, moderating the influence on WTB.[94] Finally, research by John & Gross (2004) on emotion regulation suggests that individuals may respond to AI-generated rational, informative content if it aligns with their strategies for managing emotions. This could mitigate the typically stronger effect of emotional communication.[95]

With regard to emotional communication, literature contain information on how it can influence how consumers perceive and interact with food products. King & Meiselman (2010) developed methods to measure consumer emotions associated with foods, suggesting that emotional content in advertising can create distinct emotional profiles for products.[96] This is also supported by Turnwald & Fishbach (2023), who found that emotion-based language is more persuasive when communicating about food, indicating that hedonic communication could lead to higher purchase intentions.[97] However, emotional language and authentic images are more difficult to replicate with the use of AI, also because of associations with more 'human' qualities and characteristics. Holmes and Mathews (2005, 2010) work suggests that emotional imagery can evoke stronger

[93] Rastogi, C., Zhang, Y., Wei, D., Varshney, Dhurandhar, A., Tomsett, R.J. (2020). Deciding Fast and Slow: The Role of Cognitive Biases in AI-assisted Decision-making. Journal of Artificial Intelligence Research

[94] Herwig, U., Dhum, M., Hittmeyer, A., Opialla, S., Scherpiet, S., Keller, C., Siegrist, M. (2016). Neural Signaling of Food Healthiness Associated with Emotion Processing. NeuroImage

[95] John, O.P., Gross, J.J. (2004). Healthy and unhealthy emotion regulation: personality processes, individual differences, and life span development.

[96] King, C.S., Meiselman, H.L. (2010). Development of a method to measure consumer emotions associated with foods. Food Quality and Preference

[97] Turnwald,, B.P., Fishbach A. (2023). Intuitive advertisers: Emotionality in communication about unhealthy food. Journal of Consumer Research

emotional responses than verbal representation, which might contribute to 'humanizing' qualities in communication.[98] [99]

These studies collectively indicate that AI-generated advertising campaigns have a profound impact on consumer behaviour; and while they may enhance personalization and efficiency, they could overall diminish advertising effectiveness. As AI continues to evolve, its role in moderating the relationship between communication strategies and consumer behaviour becomes increasingly significant.

## 2.5 Hypothesis 2

Building upon the literature that articulates the transformative impact of AI on advertising strategies, particularly regarding personalization, the efficacy of AI-generated campaigns, and consumer reaction to different image content stimuli it is posited:

**H2**: The use and disclosure of AI in advertising campaigns moderates the relationship between the type of communication (emotional vs. informative) and consumer willingness to buy healthy food products. When AI is used informative communication is less effective, when AI is not used emotional communication is more effective than informative.

As discussed by Wu and Wen (2021), AI-generated content is appreciated for its perceived objectivity, which in turn fosters trust and security in the ad content. However, this study analyses genAI content in general, and does not see the effects of genAI images on consumers. The 2019 study by Kim, showed that non-realistic images in advertisements may lead consumers to an attenuated judgment of the products' benefits and drawbacks, and possibly a decrease in WTB.

Given also that emotional appeals in advertising have been shown to forge stronger connections with consumers and elicit stronger purchase intentions, the integration of AI in creating these emotional narratives could decrease their impact. In fact, authenticity

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[98] Holmes, E.A., Mathews A. (2005). Mental imagery and emotion: a special relationship? Emotion

[99] Holmes, E.A., Mathews A. (2010). Mental imagery in emotion and emotional disorders. Behavior research and therapy

(emotion) and realism of advertising images, may increase WTB of consumers also for disliked brands.[100]

Some studies suggest that AI's ability to tailor content that resonates on a personal and emotional level, as highlighted by Singh (2023) and Baek (2023), means that AI-enhanced emotional advertisements could be particularly effective in influencing consumer behaviour. Even though this might be true, it analyses the targeting aspects of AI capabilities, and not the effectiveness of content images.

On the other hand, informative communication plays a critical role in educating consumers about product benefits and features. AI's role in optimizing the delivery of this information can make informative ads engaging and impactful and have a different effect than the one on emotional communication. As suggested by Qin and Jiang (2019), AI can streamline the advertising process, ensuring that informative content is delivered in a manner that is both efficient and tailored to the consumer's stage in the buying journey, meaning it should not have a significant or different effect on WTB than the non-AI campaigns.

Furthermore, the use of AI in advertising has the potential to adjust the traditional influence of emotional communication, as it can provide personalized and informative content that may neutralize biases towards emotional appeals (Rastogi et al., 2020). As mentioned, Kashive, Powale, & Kashive (2020) indicate that AI can shift the focus from emotion to utilitarian communication. Herwig et al. (2016) suggest that AI's effective processing and presentation of health information could engage reward-related brain areas, moderating the impact on willingness to buy, while John & Gross (2004) add that AI-generated rational content could align with strategies for emotion regulation, possibly reducing the typical predominance of emotional messaging.

Based on these considerations, Hypothesis 2 anticipates that AI's integration into advertising campaigns will decrease the positive impact of emotional communication on WTB, but it will do so less for informative communication.

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[100] Loebnitz, N., Grunert, K.G., (2021), Let us be realistic: The impact of perceived brand authenticity and advertising image on consumers' purchase intentions of food brands. International Journal of Consumer Studies

## 2.6 Conclusion

The literature reviewed in this chapter stresses the unique advantages and impacts of emotional (hedonic) and informative (utilitarian) communication in advertising. Emotional communication is posited to have a more pronounced effect on enhancing consumer WTB compared to informative communication, which appeals to the rational decision-making process by providing factual information about products.

The discussion on AI-generated advertising campaigns highlighted AI's potential to significantly transform the advertising landscape. This technological advancement is expected to moderate the relationship between communication strategies and consumer behaviour, with a particularly notable impact on emotional communication.

The subsequent chapters will transition from a theoretical exploration to a practical application of research methods, setting the stage for a comprehensive investigation into how modern advertising strategies, augmented by AI, influence consumer behaviour in the healthy food sector.

This research endeavours to offer valuable implications for marketers, advertisers, and policymakers seeking to navigate the evolving landscape of digital marketing with efficacy and ethical consideration.
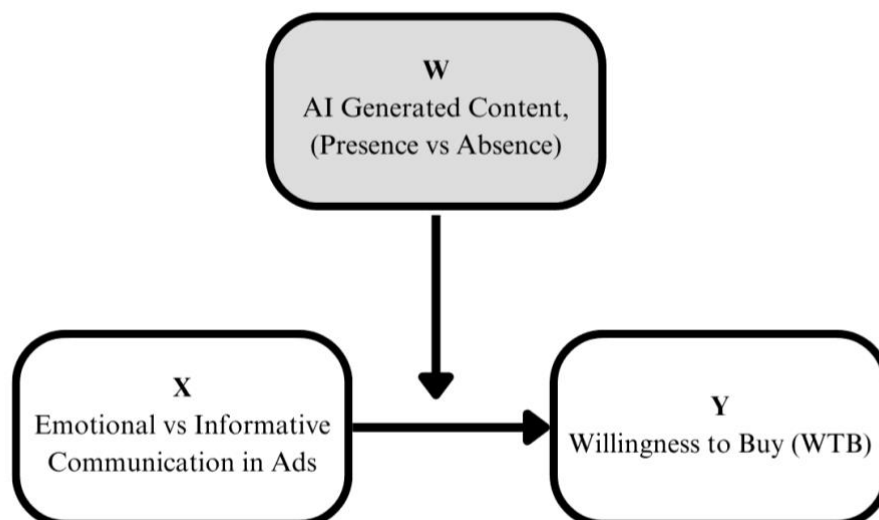
# Chapter 3 – Method

The methodology for this research incorporates a pre-test designed to validate the effectiveness of different advertising messages on perceived emotional and informational content. This pre-test was conducted using Qualtrics, which facilitated the distribution, data collection, and preliminary analysis. The survey consisted of two main sections, each targeting distinct aspects of advertising perceptions: emotional and informational. Once the survey was distributed, the data from the results was exported to be analysed with an independent T-test on SPSS.

A link on Qualtrics was created and distributed using a convenience sample method, for the IV and Moderator. The pre-test, with 78 respondents (40 males and 38 females) and an age mean was 40,37 (SD=17.22), was structured into two blocks, each containing stimuli followed by response measures. The survey was conducted in Italian as most participants were located in Italy. Every respondent saw one of the two conditions for the IV and one of the two for the Moderator and answered the following questions: "Il messaggio che ho letto aveva come obiettivo quello di provocare emozioni" (The message I read aimed to evoke emotions)[101]; "Il messaggio che ho letto aveva come obiettivo quello di fornire informazioni utili" (The message I read aimed to provide useful information)[102]; Nella pagina precedente ho visto una foto di un vero prodotto alimentare reale" and "Nella pagina precedente ho visto una foto di un prodotto alimentare vero" (both similarly meaning 'In the previous page I saw a photo of a real food product')[103]; "Nella pagina precedente ho visto una foto creata artificialmente di un prodotto alimentare" (In the previous page I saw an artificially created image of a food product).

## 3.1 Independent Variable Pre-Test

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[101] Edell, J. A., & Burke, M. C. (1987). The power of feelings in understanding advertising effects. Journal of Consumer Research.

[102] MacKenzie, S. B., & Lutz, R. J. (1989). An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context. Journal of Marketing

[103] Napoli, J., Dickinson, S. J., Beverland, M. B., & Farrelly, F. (2014). Measuring consumer-based brand authenticity. Journal of Business Research. Journal of Business Research

The first block presented respondents with two versions of an advertisement for a healthy hamburger. One version was crafted to evoke emotional responses ("Riscopri il piacere di mangiare sano con il nostro hamburger a base vegetale, un vero abbraccio di sapori che scalda il cuore. Lasciati avvolgere da un'esplosione di gusti che celebra la tua felicità e l'amore per te stesso" which translated is: ''Rediscover the pleasure of eating healthy with our plant-based burger, a true embrace of flavours that warms the heart. Let yourself be enveloped by an explosion of tastes that celebrates your happiness and love for yourself''), while the other aimed to highlight the informational benefits of the product ("Esplora i vantaggi nutrizionali del nostro hamburger a base vegetale, ricco di proteine e fibre essenziali per il tuo benessere. Ogni boccone è studiato per offrirti il massimo dei benefici salutari, supportando attivamente il tuo stile di vita attivo e consapevole", which translated is: "Explore the nutritional benefits of our plant-based burger, rich in essential proteins and fibres for your well-being. Each bite is designed to offer you the maximum health benefits, actively supporting your active and conscious lifestyle'').

Participants, who only saw one of the two ads (randomized in Qualtrics), were asked to rate their agreement with the 2 statements regarding the emotional and informative nature of the ads on a Likert scale from 1 (strongly disagree) to 7 (strongly agree). This scale was chosen for its ability to capture a range of perceptions, allowing for an analysis of respondent attitudes.

A t-test was conducted to evaluate the difference in perceptions between two groups regarding the statement "Il messaggio che ho letto aveva come obiettivo quello di provocare emozioni" (The message I read aimed to evoke emotions)[104]. Group 0 indicated the respondents that saw the informative text, while Group 1 indicated the respondents that saw the emotional text. The descriptive statistics indicated that Group 0 (N=40), with a mean score of 3.95 (SD=2.207), perceived the message as less emotionally provocative compared to Group 1 (N=37), which had a mean score of 5.86 (SD=1.417). Levene's Test for Equality of Variances was significant (F=17.527, p<0.001), indicating unequal variances between the groups. The independent samples t-test indicated that those who were assigned to the emotional advertising evaluated it as more emotional than those assigned to the informative advertising condition ($M_{emotional}$ = 5.86, SD = 1.417; $M_{informative}$ = 3.95, SD = 2.207; t(67.090)=-4.564, p<0.001). (*Appendix 1.1*)

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[104] Edell, J. A., & Burke, M. C. (1987). The power of feelings in understanding advertising effects. Journal of Consumer Research

The same procedure was taken forward to check the perceptions between the groups regarding the statement "Il messaggio che ho letto aveva come obiettivo quello di fornire informazioni utili" (The message I read aimed to provide useful information)[105]. The independent samples t-test showed a highly significant difference between the two groups (t(75)=6.832, p<0.001), in particular those assigned to the informative advertising condition (M=5.18, SD=1.551) assessed the message as providing more useful information than those assigned to the emotional advertising condition (M=2.76, SD=1.553). . (*Appendix 1.2*)

These results indicate that the message was perceived as significantly more useful by Group 0 compared to Group 1, demonstrating the effectiveness of the message's content in conveying useful information.

## 3.2 Moderator Pre-test

The second part of the survey tested the participants' ability to discern AI-generated images (made with RealisticImageGeneratorAI) from non-AI images in the context of the same hamburger advertisement. This section aimed to understand how the labelling of images as AI-generated influences perceptions of authenticity and realism. Two identical images were randomized, one labelled as "generated by AI" and the other unlabelled, and participants, who only saw one of the two images, responded to statements about the realness and artificial nature of these images using the same seven-point Likert scale (*Appendix 1.3, 1.4*). Another check was inserted asking participants to answer 'yes' or 'no' to a statement affirming the image was AI generated.

A first independent samples t-test was conducted to compare the perceptions between two groups regarding the computed variable NONAI_Objective, which is the average of two items: "Nella pagina precedente ho visto una foto di un vero prodotto alimentare reale" and "Nella pagina precedente ho visto una foto di un prodotto alimentare vero" (both similarly meaning 'In the previous page I saw a photo of a real food product')[106]. The

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[105] MacKenzie, S. B., & Lutz, R. J. (1989). An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context. Journal of Marketing

[106] Napoli, J., Dickinson, S. J., Beverland, M. B., & Farrelly, F. (2014). Measuring consumer-based brand authenticity. Journal of Business Research. Journal of Business Research

reliability analysis of the scale used in the study indicates a high level of internal consistency, as evidenced by a Cronbach's Alpha of 0.939. (*Appendix 1.5*) In the data, Group 0 indicated the respondents that saw the image without the 'Generated by AI' text, while Group 1 indicated the respondents that saw the image with 'Generated by AI' text. Descriptive statistics indicated that Group 0 (N=39), with a mean score of 5.3974 (SD=1.69045), perceived the photo as more realistic compared to Group 1 (N=35), which had a mean score of 2.7286 (SD=2.06278). Levene's Test for Equality of Variances was not significant (F=2.893, p=0.093), indicating that the assumption of equal variances was met. The independent samples t-test revealed a highly significant difference between the two groups ($t(72)=6.112$, $p<0.001$) when equal variances were assumed, and ($t(65.912)=6.046$, $p<0.001$) when equal variances were not assumed. The mean difference of 2.66886 (SE=0.43668) suggests that Group 0 perceived the photo as significantly more realistic than Group 1. The 95% confidence interval for the mean difference ranged from 1.79835 to 3.53938, supporting the reliability of this finding. Additionally, Cohen's d effect size was calculated at 1.87550, indicating a large effect size, which implies a substantial difference in the perceived realism between the groups.

These results indicate that the photo was perceived as significantly more realistic by Group 0 compared to Group 1, demonstrating the effectiveness of the visual representation in conveying realism. (*Appendix 1.5*)

A last independent samples t-test was performed to examine the differences in perceptions between two groups regarding the statement "Nella pagina precedente ho visto una foto creata artificialmente di un prodotto alimentare" (In the previous page I saw an artificially created image of a food product). Descriptive statistics revealed that Group 0 (N=40), with a mean score of 2.78 (SD=1.874), perceived the image as less artificially created compared to Group 1 (N=35), which had a mean score of 5.57 (SD=2.146). Levene's Test for Equality of Variances was not significant (F=0.207, p=0.651), indicating that the assumption of equal variances holds. The independent samples t-test indicated a highly significant difference between the two groups ($t(73)=-6.025$, $p<0.001$) when equal variances were assumed, and ($t(68.087)=-5.970$, $p<0.001$) when equal variances were not assumed. The mean difference of -2.796 (SE=0.464) suggests that Group 0 perceived the image as significantly less artificially created than Group 1. The 95% confidence interval for the mean difference ranged from -3.721 to -1.871, also confirming the reliability of this result. Additionally, Cohen's d effect size was calculated at 2.005, indicating a very

large effect size, which signifies a substantial difference in perceived artificiality between the groups.

These findings imply that the image was perceived as significantly more artificially created by Group 1 compared to Group o, underscoring the effectiveness of the visual representation in being perceived as AI generated. (*Appendix 1.6*)

Additionally, a Chi-Square test was performed to evaluate the effectiveness of the manipulation regarding participants' recognition of whether an image was generated using artificial intelligence (AI), with possible answers being 'yes' or 'no'. The crosstabulation results revealed that 71.1% of participants who were shown an AI-generated image correctly identified it as AI-generated, while 28.9% incorrectly identified it as not AI-generated. Conversely, 76.3% of participants who were shown a non-AI-generated image correctly identified it as not AI-generated, and 23.7% incorrectly identified it as AI-generated. Overall, 52.6% of participants correctly identified the nature of the image, whereas 47.4% did not.

The Pearson Chi-Square test yielded a value of 17.100 with 1 degree of freedom (which was significant at $p < 0.001$. <0.001),

These significant Chi-Square test results indicate that the manipulation was effective in influencing participants' ability to recognize whether an image was generated by AI. The higher proportion of correct identifications in both conditions demonstrates that the manipulation created distinct and recognizable conditions for the participants. (*Appendix 1.7*)

## 3.3 Considerations

These pre-tests are foundational for the subsequent phases of the thesis, providing essential data on the recognition of different advertising text, and also the public's ability to recognize AI involvement in ad creation. The results from this pre-test will inform the development of a more detailed experimental design in the main study phase.

## 3.4 Main study

The main study, built upon the validation gathered from the pre-test aims at testing H1 and H2. 161 participants (81 Males, 75 Females and 5 Prefer not to say; $M_{age}$ = 32.62, SD = 14.85) selected through a convenience sample procedure (as in the pre-test) (*Appendix 2.1*) took part in a 2 (advertising type: emotional ad vs. informative ad) x 2 (AI generated content presence vs. absence) between subjects online experiment. Indeed, participants were randomly assigned to one of four conditions each representing an advertisement of a "Healthy Hamburger." For the manipulation of the language, participants either saw a message indicating "*Esplora i vantaggi nutrizionali del nostro hamburger a base vegetale, ricco di proteine e fibre essenziali per il tuo benessere. Ogni boccone è studiato per offrirti il massimo dei benefici salutari, supportando attivamente il tuo stile di vita attivo e consapevole*" or "*Riscopri il piacere di mangiare sano con il nostro hamburger a base vegetale, un vero abbraccio di sapori che scalda il cuore. Lasciati avvolgere da un'esplosione di gusti che celebra la tua felicità e l'amore per te stesso*" while for the manipulation of the moderator participants were either exposed to an image showing the statement "Image Generated by AI" or an image without the statement. (*Appendix 4.0*) Following the exposure to the advertisements, participants indicated their willingness to buy by answering to a 4 item - 7 point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The scale was adapted from Spears & Singh (2004) and is comprised of 4 items: "*Intendo acquistare questo prodotto, Comprerò questo prodotto, Considererei l'acquisto di questo prodotto, Comprerei questo prodotto in un prossimo futuro*" ("I intend to purchase this product, I plan to buy this product, I will purchase this product in the near future, I would consider buying this product").[107] Additional checks were included in the study to confirm the results of the pretest (both for the IVs and for the Moderator), together with a perception check where respondents indicated whether they believed the image was generated by AI or not.

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[107] Spears, N., & Singh, S. N. (2004). Measuring Attitude Toward the Brand and Purchase Intentions. Journal of current issues & research in advertising,

### 3.4.1 Analysis

Two variables were created to group the 4 conditions. 'Ad_Type' showed the value 1 for respondents that viewed the emotional ad, and 0 for respondents that viewed the informative ad. 'AI_NoAI' variable displayed value 1 for respondents that viewed the AI disclosed ad, and value 0 for respondents that viewed the ad without the AI disclosure text.

Before analysing the effects of the IV and moderator, further checks, mirroring those carried out for the pre-test, were conducted to confirm the pretest results. The items used were the same, and the identical double ended AI check question was included as well. For this question, a Chi-Square test was repeated in the same way. The statistical analysis showed a significant association between the actual AI content of the advertisements and the participants' ability to identify them as such, with a Pearson Chi-Square value of 32.305 and a $p<0.001$. This significance indicates that the experimental manipulation was successful, as a majority of participants correctly recognized AI-generated images and non-AI images for what they were. Specifically, 75.3% of participants exposed to AI-generated ads correctly identified them as AI-generated, while 70% of those viewing non-AI ads failed to identify them as such, mistaking them for AI-generated content. (*Appendix 2.2*)

Following the Chi-Squared, for all the 4 conditions (i.e. emotional ad, informative ad, AI, Non AI), Independent T-Tests were run. The first t-test assessed differences in emotional perception between emotional (Group 1) and informative (Group 0) advertisements. Group 1 (N=81) reported a mean score of 5.37 (SD=1.639), significantly higher than Group 0's 3.05 (SD=1.916), indicating a stronger emotional response ($t(146.159)=8.085$, $p<0.001$). The variance was unequal ($F=6.406$, $p=0.012$), reinforcing the significant distinction by respondents' of emotional intention in the ad.. (*Appendix 2.3*)

A second t-test was conducted to compare the perceptions of informativeness between groups exposed to different advertisement styles. The analysis awlays involved Group 0, which viewed informative ads, and Group 1, which viewed emotional ads. Descriptive statistics showed that Group 0 (N=75) had a higher mean perception score of 5.01 (SD=1.805), compared to Group 1 (N=81), which had a mean score of 3.02 (SD=1.775). This indicated a statistically significant difference in perceived informativeness of the informative ad ($t(152.646)=-6.936$, $p<0.001$). The variance between the groups was

assumed to be equal, as the Levene's Test was not significant (F=0.133, p=0.716), affirming the t-test results. (*Appendix 2.4*)

The same T-Test was conducted to examine differences in perceptions between respondents exposed to AI-generated images (coded as 1) and those who saw non-AI images (coded as 0). Descriptive statistics revealed that respondents who viewed AI-generated images reported significantly higher acknowledgment of AI usage with a mean score of 5.40 (SD=1.757), compared to a mean score of 3.37 (SD=2.064) for those who viewed non-AI images. The mean difference of 2.036 was statistically significant (t(151.265)=6.625, p<0.001). This finding indicates that participants were able to discern and acknowledge the AI elements in the images effectively. (*Appendix 2.5*)

The last T-Test was conducted to assess perceptions of realism in product imagery between groups exposed to AI-generated and non-AI images. Respondents who viewed non-AI images reported significantly higher realism, with a mean score of 4.81 (SD=1.923), compared to a mean of 3.08 (SD=2.038) for those who viewed AI-generated images. This difference, quantified at -1.735 points, was statistically significant (t(153.581) = -5.481, p< 0.001). The size of this effect, Cohen's d = 1.980, highlights a strong perceived difference in realism between the two conditions, underscoring the impact of AI on perceived authenticity. (*Appendix 2.6*)

After confirming the pre-test results, the main study was carried out. First, however, the scale used for the research was checked for reliability. The reliability analysis showed an excellent internal consistency with a Cronbach's alpha of 0.964. (*Appendix 2.7*)

## 3.4.2 Main effect

As mentioned above, the sample consisted of 161 participants, and two variables were created to study and analyse the conditions. The frequencies were checked for AdType and AI_NoAI variables. For AdType, the study showed a nearly balanced distribution between those who viewed emotional (Ad_Type = 1, n = 84) and informative (Ad_Type = 0, n = 77) advertisements, demonstrating a correct near equilibrium in distribution, with 52.2% exposed to emotional ads and 47.8% to informative ads. Similarly, the distribution of participants regarding their exposure to AI-generated content (AI_NoAI) was also

nearly even, with 80 participants (49.7%) viewing non-AI ads and 81 participants (50.3%) viewing AI-generated ads. (*Appendix 3.1*)

## 3.4.2.1 Hypothesis 1 & 2

To test H1 and H2  a Two-way ANOVA was conducted. The ANOVA results indicated that the interaction (Ad_Type*AI_NoAI) between ad type and AI disclosure significantly affected WTB ($F(1, 151) = 7.759$, $p = 0.006$), and is statistically significant. In particular, in the interaction, when AI was not used and disclosed in the ad, those who saw the informative appeal ($M = 3.82$, $SD = 1.47$) reported lower willingness to buy than those who saw the emotional advertisement ($M = 4.83$, $SD = 1.59$; $F=8.39$, $p=.004$), partially supporting the second hypothesis.  Instead, when AI was used and disclosed in the ad, surprisingly, those who saw the informative ad ($M = 4.3$, $SD = 1.4$) reported greater willingness to buy than those who saw the emotional advertisement ($M = 3.93$, $SD = 1.7$). However, this difference is not statistically significant ($F=1.21$, $p=0.29$). Hence, it can be stated that, while AI does moderate the relationship of the ad type and WTB, informative communication showed to be more effective in the presence of AI than with its absence, albeit with little significance. Hence, because of the interaction results, H2 cannot be completely confirmed. Indeed, only one part of H2 can be confirmed: that AI moderates the effect, and that when AI is not used emotional communication is more effective than informative. While, when AI is used, varying the language used in the advertisement (emotional vs informative) does not differently effect consumers' WTB of healthy food products.

Moreover, looking at the main effect (without interaction) of the independent variable we can see that results show a statistically not significant effect ($M_{Informative}=4.07$, $SD_{Informative}=1.44$ vs. $M_{Emotional}=4.40$, $SD_{Emotional}=1.70$; $F=1.63$, $p=0.20$) thus suggesting that there is no difference in terms of the effectiveness of emotional and informative advertising in promoting healthy food consumptions (*Appendix 3.2*), contrasting with H1, which will be further studied with an independent T-test.

**H1**: *Emotional (hedonic) communication in advertising will have a more significant positive effect on consumer willingness to buy healthy food products compared to informative (utilitarian) communication*

**H2**: *The use and disclosure of AI in advertising campaigns moderates the relationship between the type of communication (emotional vs. informative) and consumer willingness to buy healthy food products. When AI is used informative (vs. emotional) communication is less effective, when AI is not used emotional communication is more effective than informative.*

These results, in contrast with studies stating the greater effect of emotional advertising, show the importance of research of single sectors and industries, and how in the world of communication and marketing, every context needs to be studied.

## 3.4.2.2 Hypothesis 1 - Test

To confirm the rejection of H1, another independent T-test was run. The test was conducted always to evaluate the effect of ad type on consumers' willingness to buy (WTB), comparing emotional (coded as 1) and informative (coded as 0) advertisements. The group exposed to emotional advertisements (N=79) had a mean WTB score of 4.41 (SD=1.70), while the group viewing informative advertisements (N=76) had a mean score of 4.06 (SD=1.45). Levene's test for equality of variances was not significant (F=1.220, p=.271), suggesting that the variance in WTB scores was similar across the groups. However, the independent samples t-test did not reveal a statistically significant difference in WTB between the two ad types (t(153)=-1.3338, p=.183). The mean difference was -0.33927 (95% CI: -.84040 to .16186), and effect sizes were moderate to large (Cohen's d=1.57873). (*Appendix 3.3*) Despite the effect sizes indicating a practical difference, the lack of statistical significance suggests that the hypothesized greater impact of emotional advertisements on WTB compared to informative ads was not supported in this analysis, aligning with the findings from the two-way ANOVA, and rejecting H1.

# Chapter 4 – Limitations, Contributions, Implications and Conclusions

As seen with this research, the different types of communication, and different advertising techniques, may have different results on consumers when evaluating their purchase intention in the healthy food sector, an industry which is rapidly growing and evolving. The results of this study are quite interesting, and can be a starting point for future research on the psychological aspects behind different reactions to certain stimuli, and the reaction to the consumer awareness of genAI and its use. It is also interesting to note that most respondents did not recognize AI use in the image when not disclosed (as seen in the Chi-Square data in *Appendix 1.7*), raising questions and debate around the ethics of artificial intelligence in marketing and its non disclosure.

This research can offer contributions to literature surrounding communication, advertising and AI, and can also give possible important information to managers and marketing directors in the healthy food sector. However, although this study can offer interesting insights, it comes with its limitations.

## 4.1 Limitations & Directions for Future Research

Several limitations must be acknowledged in this study, relating to the design, methodology, and generalizability, which may affect the interpretation and applicability of the findings. One of the primary limitations of this research is the sample size and demographic composition of the participants. The study utilized a convenience sample, which may not be representative of the broader population. Most participants were located in Italy, and the survey was conducted in Italian. This geographic and linguistic focus limits the generalizability of the findings to other cultural and linguistic contexts. Future research should aim to include a more diverse and representative sample to enhance the external validity of the results. Additionally, expanding the sample size would increase the statistical power of the study, allowing for more robust and reliable conclusions.

The use of an online survey methodology presents certain limitations. While online surveys are efficient, they may introduce biases related to self-selection. Participants who choose to respond to online surveys may have different characteristics compared to those who do not, potentially skewing the results. Moreover, online surveys rely on self-

reported data, which can be subject to social desirability bias[108] and inaccuracies in self-assessment. Participants may provide responses they believe are expected or desirable rather than their true opinions or behaviors. Future studies should consider using mixed methods, including qualitative approaches such as interviews or focus groups, to gain deeper insights into consumer perceptions and behaviors.

The study's experimental design, while rigorous, has inherent limitations. The artificial nature of the experimental setting may not fully capture the complexity of real-world advertising contexts. Also, the ficticious brand logo included for the purpose of advert realism, may also have influenced respondents. Moreover, participants were exposed to specific advertisements under controlled conditions, which may not reflect their natural viewing environment. In reality, consumers are exposed to a multitude of advertisements across various media platforms, often simultaneously. This exposure can lead to different levels of attention, engagement, and emotional response than those observed in a controlled experiment. Future research should consider more naturalistic designs or field experiments to better understand how consumers interact with advertisements in real-world settings. The product used could have also influenced consumer intention. In this study, plant-based burgers were used, as it is a very common and accessible product in most western markets. Future research should test the effect of different healty food products on consumers.

The study also explored the moderating role of AI disclosure on the effectiveness of emotional versus informative advertisements. While the findings indicated a significant interaction effect, the study did not find different results for the two type of ads. To understand these findings, future research should also delve deeply into the underlying psychological mechanisms driving this effect. The impact of AI disclosure on consumer perceptions of authenticity and trust warrants further investigation. Understanding if AI disclosure might diminish the effectiveness of ads could provide valuable insights for marketers. Future research should incorporate qualitative measures or experimental manipulations to explore these psychological processes in greater detail.

The primary dependent variable in this study was consumer willingness to buy (WTB). While WTB is a commonly used measure in advertising research, it has a common problem in academic research, which is related to the fact that it is a self-reported intention rather than an actual behavior, and has its often mentioned limitations in many

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[108] Grimm, P. (2010), Social Desirability Bias.

academic papers. There is often a gap between what consumers say they will do and what they actually do. Future studies should aim to measure actual purchasing behavior or use behavioral proxies, such as click-through rates or sales data, to validate the self-reported WTB findings. Additionally, studies could track changes in WTB and actual purchases over time to better understand the long-term effects of advertising strategies.

The study focused on the disclosure of AI-generated content but did not explore the full scope of AI integration in advertising. AI can influence various aspects of marketing, from personalization and targeting to content creation and consumer analytics, and other topics that were mentioned several times in this research. Future research should investigate the broader implications of AI in advertising, including how different AI applications (e.g., chatbots, recommendation systems) interact with various communication strategies. Examining the ethical considerations and potential biases introduced by AI in advertising is also crucial for developing responsible and effective marketing practices.

Furthermore, the study differentiated between emotional and informative advertising content, but the distinction between these types of content can be complex and not always clear to consumers. Advertisements often contain elements of both emotional and informative appeals. The binary classification used in this study may not fully capture the multifaceted nature of real-world advertisements. The perception of what is emotional and what is informative can also differ based on cultural aspects. This study, in fact, was conducted within a specific cultural context, which may limit the applicability of the findings to other cultures. Different cultures may have varying attitudes towards AI, emotional appeals, and advertising in general. Cross-cultural studies are needed to explore how cultural factors moderate the effectiveness of emotional and informative advertisements and the impact of AI disclosure.

Lastly, there is still a relatively limited body of academic research specifically examining the role of AI in advertising. As AI technologies are relatively new and continue to evolve, the academic community is still in the early stages of exploring their implications in marketing and advertising contexts. This limitation highlights the need for ongoing research to understand the full impact of AI on advertising strategies, consumer perceptions, and behaviors.

## 4.2 Academic Contributions

This thesis contributes to the academic literature in several significant ways. Studies by Fels (2016), Samoggia et al. (2019), and Bublitz & Peracchio (2015), show important results in studies around communication strategies in the food industry. As stressed, this study offers academic contribution by studying the effects of language on the food industry, but also shows its interaction with AI. While most literature analysed, often favoured the effects of emotional communication (especially for hedonic products), this study demonstrated that in the healthy food industry, informative communication has an equal effect (H1). In studying the interaction, instead, emotional communication shows better results in the absence of AI. Moreover, it is interesting to see that (when only observing means) the effect of informative communication is higher when AI is shown, but the effect of emotional communication decreases (however without statistical significance). This could be due to the psychological aspects behind the use of AI, which could reduce the effect of the communication which is based more on consumer feeling and trust.

Hence, this study provides empirical evidence on the differential impact of emotional versus informative advertisements on consumer willingness to buy (WTB) healthy food products. By not statistically confirming that emotional ads are more effective in driving purchase intentions, indeed, this research collides with existing literature on the persuasive power of emotional appeals in advertising. However, as said, it is also interesting to note that in the interaction analysis, absence of AI, emotional communication has a larger effect. Research mentioned like the one conducted by Holbrook and Batra (1987) have long established that emotions play a critical role in advertising effectiveness by influencing attitudes towards the ad and the brand, which in turn impacts purchase intentions. Similarly, Kemp, Bui, and Chapa (2012) demonstrated that emotional advertising effectively manages consumer emotions, thereby influencing their purchase decisions. This study, however, shows that in the healthy food industry this is not always the case.

Second, the study extends the understanding of AI's role in advertising by examining how AI disclosure moderates the effect of ad type on consumer behavior. This adds a new

dimension to the literature on AI in marketing, highlighting the importance of transparency in AI-generated content. Wu and Wen (2021) found that AI-generated advertisements may be perceived as more objective, which enhances their effectiveness. However, this study revealed that AI disclosure can also not influence the impact of WTB, suggesting that consumers may possibly not perceive AI involvement as reducing the authenticity of emotional appeals. This finding does not align with Arango, Singaraju, and Niininen's (2023) work, which noted that while AI-generated content could lead to skepticism, emphasizing ethical motives can counteract these effects.

Additionally, this research addresses a gap in the literature by focusing on the healthy food industry, a sector that has received less attention in studies on advertising and AI. Verbeke (2008) discussed how both emotional and informative factors influence food choices, underlining the importance of trust and personal relevance in communication effectiveness. By providing insights specific to healthy food products, this thesis offers valuable implications for marketers aiming to promote healthier eating habits through effective advertising strategies. The findings support the notion that emotional communication and informative communication are crucial in driving consumer engagement and WTB in the context of this industry.

The research also contributes to the ongoing dialogue about the ethical implications of AI in advertising. The findings do not particularly emphasize the need for transparency and authenticity in AI-generated content to maintain consumer trust. However, they do show that consumers do not always recognize AI generated images. This is particularly relevant given the concerns raised by Coffin (2022) about the ethical and ontological questions surrounding AI in advertising. The study by Matthews and Fastnedge also highlights the importance of maintaining authenticity and ethical standards in AI-driven advertising campaigns, reinforcing the need for responsible AI use in marketing.

Moreover, this thesis integrates findings from various studies on the psychological impact of advertising. For example, the work of Drolet et al. (2007) on age-related differences in response to emotional versus informative ads offers a understanding of how demographic factors can influence advertising effectiveness. This research nearly follows its findings by observing that emotional communication is slightly preferred for 'hedonic' products in some cases. By incorporating such insights, this research offers a more comprehensive view of the factors that drive consumer behavior in response to different types of advertisements.

In conclusion, this study makes several important academic contributions. It provides empirical evidence for the equal effectiveness of emotional advertisements in increasing WTB for healthy food products with the use of AI, explores its role, addresses a significant gap in the literature related to the food industry, and offers a robust methodological approach for future research. Additionally, it contributes to the ethical discourse on AI in advertising, suggesting the need for transparency and authenticity. These contributions enrich the academic understanding of advertising strategies and consumer behavior, providing valuable insights for both scholars and practitioners in the field.

## 4.3 Managerial Implications

The findings of this study have several practical implications for marketers and advertisers in the food industry. First, the rejection of H1 stating that emotional advertisements are more effective in increasing consumer willingness to buy suggests that marketers should not only prioritize emotional appeals in their advertising strategies.

It is valuable to note however, than in the case of interaction, the absence of AI disclosure makes emotional communication preferrable. Emotional ads that evoke positive feelings and connect with consumers on a personal level can drive higher purchase intentions, but so can informative messages. However, while not significant for H1, there is a difference in the means of emotional and informative communication and WTB. Indeed, emotional communication obtained higher results than informative communication in the absence of AI, which still could indicate a slight preference.

However, the moderating effect of AI disclosure on the effectiveness of emotional ads does not highlight any need for caution. Indeed, marketers should observe the same results for emotional and informative communication when AI is disclosed. Nevertheless, if AI involvement is disclosed, it is crucial to ensure that the content maintains a high level of authenticity and relatability. Disclosure of AI also depends on the legal state of where the advertisement is distributed and of where the companies operate. Discourse, around the use of AI and how it can be limited in being used for generative qualities, especially online, is of central importance to the EU and EU member countries.

In light of this, marketers should still pursue strategies that could include emphasizing the human oversight and creativity involved in the ad creation process or focusing on the benefits of AI, such as enhanced personalization and relevance of the ads, more than the actual generation of the ad itself.

For the food industry specifically, these findings suggest that advertisements for healthy food products should leverage emotional and informative appeals without using AI to encourage healthier eating habits. Informative ads, while useful for conveying nutritional benefits, may be slightly less effective in driving immediate purchase intentions. Therefore, a balanced approach that incorporates emotional storytelling with key informative elements could be more effective in this sector.

Furthermore, the study's insights into consumer responses to AI-disclosed ads can inform the development of ethical guidelines for AI use in advertising. Marketers, and anyone using the technology, should use AI responsibly, ensuring that AI-generated content is transparent, ethical, and respects consumer trust.

## 4.4 Conclusion

This thesis provides valuable insights into the impact of emotional versus informative advertisements and the moderating role of AI disclosure on consumer WTB for healthy food products, while also offering an overview of the history of the industry and of communication. These findings contribute to academic literature, offer practical guidance for marketers, and highlight the importance of ethical considerations in AI-driven advertising. As AI continues to evolve, it is crucial for advertisers to balance technological advancements with transparency and authenticity to maintain consumer trust and achieve successful advertising outcomes. Future research should address the identified limitations and continue exploring the dynamic interactions between advertising strategies and emerging technologies to enhance our understanding of effective marketing practices in the digital age.

By giving a background of the food industry's history, its characteristics, new trends and possible evolution, and at the same time offering key points on the history and importance of communication, this study aims not only to give a contribution to existing literature and offer practical insights, but also to stimulate reflection into what the future of the industry will be and how new technology will impact day to day interaction with it. It is

of upmost importance to understand our behaviour, as human beings, and how it changes when confronted with this kind of fast evolving technology; as it is also crucial to comprehend and reflect on the ethical implications of it in advertising.

# Appendix

*1.1*

Group 0 = Viewed Informative Ad

Group 1 = Viewed Emotional Ad

**Group Statistics**

| | EmoInf | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo quello di provocare emozioni | .00 | 40 | 3.95 | 2.207 | .349 |
| | 1.00 | 37 | 5.86 | 1.417 | .233 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo quello di provocare emozioni | Equal variances assumed | 17.527 | <.001 | -4.490 | 75 | <.001 | <.001 | -1.915 | .427 | -2.764 | -1.065 |
| | Equal variances not assumed | | | -4.564 | 67.090 | <.001 | <.001 | -1.915 | .420 | -2.752 | -1.077 |

**Independent Samples Effect Sizes**

| | | Standardizer[a] | Point Estimate | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente | Cohen's d | 1.870 | -1.024 | -1.497 | -.545 |

*1.2*

Group 0 = Viewed Informative Ad

Group 1 = Viewed Emotional Ad

**Group Statistics**

| | EmoInf | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo quello di fornire informazioni utili | .00 | 40 | 5.18 | 1.551 | .245 |
| | 1.00 | 37 | 2.76 | 1.553 | .255 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Significance | | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | | | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo quello di fornire informazioni utili | Equal variances assumed | .000 | .992 | 6.832 | 75 | <.001 | <.001 | 2.418 | .354 | 1.713 | 3.123 |
| | Equal variances not assumed | | | 6.832 | 74.518 | <.001 | <.001 | 2.418 | .354 | 1.713 | 3.123 |

**Independent Samples Effect Sizes**

| | | Standardizer[a] | Point Estimate | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Il | Cohen's d | 1.552 | 1.558 | 1.043 | 2.066 |
| | Hedges' correction | 1.567 | 1.543 | 1.032 | 2.045 |

*1.4*

*NON AI Image*

*1.5*

→ **Reliability**

**Scale: ALL VARIABLES**

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 74 | 94.9 |
| | Excluded[a] | 4 | 5.1 |
| | Total | 78 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .939 | .940 | 2 |

Group 0 = Viewed Non AI Image

Group 1 = Viewed labeled AI Image

**Group Statistics**

| | AI | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| NONAI_Objective | .00 | 39 | 5.3974 | 1.69045 | .27069 |
| | 1.00 | 35 | 2.7286 | 2.06278 | .34867 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference | Lower | Upper |
| NONAI_Objective | Equal variances assumed | 2.893 | .093 | 6.112 | 72 | <.001 | <.001 | 2.66886 | .43668 | 1.79835 | 3.53938 |
| | Equal variances not assumed | | | 6.046 | 65.912 | <.001 | <.001 | 2.66886 | .44141 | 1.78753 | 3.55020 |

**Independent Samples Effect Sizes**

| | | Standardizer[a] | Point Estimate | 95% Confidence Interval Lower | 95% Confidence Interval Upper |
|---|---|---|---|---|---|
| NONAI_Objective | Cohen's d | 1.87550 | 1.423 | .907 | 1.931 |
| | Hedges' correction | 1.89533 | 1.408 | .898 | 1.911 |
| | Glass's delta | 2.06278 | 1.294 | .738 | 1.837 |

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

*1.6*

Group 0 = Viewed Non AI Image

Group 1 = Viewed labeled AI Image

**Group Statistics**

| | AI | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Nella pagina precedente ho visto una foto creata artificialmente di un prodotto alimentare | .00 | 40 | 2.78 | 1.874 | .296 |
| | 1.00 | 35 | 5.57 | 2.146 | .363 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Nella pagina precedente ho visto una foto creata artificialmente di un prodotto alimentare | Equal variances assumed | .207 | .651 | -6.025 | 73 | <.001 | <.001 | -2.796 | .464 | -3.721 | -1.871 |
| | Equal variances not assumed | | | -5.970 | 68.087 | <.001 | <.001 | -2.796 | .468 | -3.731 | -1.862 |

**Independent Samples Effect Sizes**

| | | Standardizer[a] | Point Estimate | 95% Confidence Interval Lower | Upper |
|---|---|---|---|---|---|
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente | Cohen's d | 2.005 | -1.395 | -1.897 | -.884 |

*1.7*

**Chi-Square Tests**

| | Value | df | Asymptotic Significance (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|---|---|---|---|---|---|
| Pearson Chi-Square | 17.100[a] | 1 | <.001 | | |
| Continuity Correction[b] | 15.253 | 1 | <.001 | | |
| Likelihood Ratio | 17.817 | 1 | <.001 | | |
| Fisher's Exact Test | | | | <.001 | <.001 |
| Linear-by-Linear Association | 16.875 | 1 | <.001 | | |
| N of Valid Cases | 76 | | | | |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.00.

b. Computed only for a 2x2 table

**Case Processing Summary**

| | Cases | | | | | |
|---|---|---|---|---|---|---|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: * AI | 76 | 97.4% | 2 | 2.6% | 78 | 100.0% |

**Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: * AI Crosstabulation**

| | | | AI | | |
|---|---|---|---|---|---|
| | | | .00 | 1.00 | Total |
| Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: | Si | Count | 11 | 27 | 38 |
| | | % within Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: | 28.9% | 71.1% | 100.0% |
| | | % within AI | 27.5% | 75.0% | 50.0% |
| | | % of Total | 14.5% | 35.5% | 50.0% |
| | No | Count | 29 | 9 | 38 |
| | | % within Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: | 76.3% | 23.7% | 100.0% |
| | | % within AI | 72.5% | 25.0% | 50.0% |
| | | % of Total | 38.2% | 11.8% | 50.0% |
| Total | | Count | 40 | 36 | 76 |
| | | % within Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: | 52.6% | 47.4% | 100.0% |
| | | % within AI | 100.0% | 100.0% | 100.0% |
| | | % of Total | 52.6% | 47.4% | 100.0% |

*2.1*

## Descriptive Statistics

|  | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| Age_numeric | 145 | .18 | .67 | .3262 | .14850 |
| Valid N (listwise) | 145 | | | | |

*2.2*

|  |  |  | precedentemente era generata con l'intelligenza artificiale: | | Total |
|---|---|---|---|---|---|
|  |  |  | Si | No | |
| AI_NoAI | .00 | Count | 24 | 56 | 80 |
|  |  | % within AI_NoAI | 30.0% | 70.0% | 100.0% |
|  |  | % within Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: | 29.3% | 74.7% | 51.0% |
|  |  | % of Total | 15.3% | 35.7% | 51.0% |
|  | 1.00 | Count | 58 | 19 | 77 |
|  |  | % within AI_NoAI | 75.3% | 24.7% | 100.0% |
|  |  | % within Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: | 70.7% | 25.3% | 49.0% |
|  |  | % of Total | 36.9% | 12.1% | 49.0% |
| Total |  | Count | 82 | 75 | 157 |
|  |  | % within AI_NoAI | 52.2% | 47.8% | 100.0% |
|  |  | % within Per favore, indica se l'immagine che hai visto precedentemente era generata con l'intelligenza artificiale: | 100.0% | 100.0% | 100.0% |
|  |  | % of Total | 52.2% | 47.8% | 100.0% |

## Chi-Square Tests

|  | Value | df | Asymptotic Significance (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|---|---|---|---|---|---|
| Pearson Chi-Square | 32.305[a] | 1 | <.001 | | |
| Continuity Correction[b] | 30.514 | 1 | <.001 | | |
| Likelihood Ratio | 33.552 | 1 | <.001 | | |
| Fisher's Exact Test | | | | <.001 | <.001 |
| Linear-by-Linear Association | 32.100 | 1 | <.001 | | |
| N of Valid Cases | 157 | | | | |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 36.78.

b. Computed only for a 2x2 table

*2.3*

Group 0 = Viewed Informative Ad

Group 1 = Viewed Emotional Ad

**-Test**

**Group Statistics**

| | Ad_Type | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 completamente d'accordo quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo quello di provocare emozioni | 1.00 | 81 | 5.37 | 1.639 | .182 |
| | .00 | 75 | 3.05 | 1.916 | .221 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 completamente d'accordo quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo quello di provocare emozioni | Equal variances assumed | 6.406 | .012 | 8.134 | 154 | <.001 | <.001 | 2.317 | .285 | 1.754 | 2.880 |
| | Equal variances not assumed | | | 8.085 | 146.159 | <.001 | <.001 | 2.317 | .287 | 1.751 | 2.883 |

**Independent Samples Effect Sizes**

| | | Standardizer[a] | Point Estimate | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 completamente | Cohen's d | 1.778 | 1.303 | .956 | 1.648 |

*2.4*

Group 0 = Viewed Informative Ad

Group 1 = Viewed Emotional Ad

**Group Statistics**

| | Ad_Type | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo quello di fornire informazioni utili | 1.00 | 81 | 3.02 | 1.775 | .197 |
| | .00 | 75 | 5.01 | 1.805 | .208 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | 95% Confidence Interval of the Difference | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo quello di fornire informazioni utili | Equal variances assumed | .133 | .716 | -6.936 | 154 | <.001 | <.001 | -1.989 | .287 | -2.555 | -1.422 |
| | Equal variances not assumed | | | -6.932 | 152.646 | <.001 | <.001 | -1.989 | .287 | -2.555 | -1.422 |

**Independent Samples Effect Sizes**

| | | Standardizer[a] | Point Estimate | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Il messaggio che ho letto aveva come obiettivo | Cohen's d | 1.789 | -1.112 | -1.448 | -.772 |
| | Hedges' correction | 1.798 | -1.106 | -1.441 | -.769 |
| | Glass's delta | 1.805 | -1.102 | -1.460 | -.738 |

*2.5*

Group 0 = Viewed Non AI Image

Group 1 = Viewed labeled AI Image

**Group Statistics**

| | AI_NoAI | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Nella pagina precedente ho visto una foto creata artificialmente di un prodotto alimentare | 1.00 | 77 | 5.40 | 1.757 | .200 |
| | .00 | 79 | 3.37 | 2.064 | .232 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Significance | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Nella pagina precedente ho visto una foto creata artificialmente di un prodotto alimentare | Equal variances assumed | 5.825 | .017 | 6.625 | 154 | <.001 | <.001 | 2.036 | .307 | 1.429 | 2.642 |
| | Equal variances not assumed | | | 6.639 | 151.265 | <.001 | <.001 | 2.036 | .307 | 1.430 | 2.641 |

**Independent Samples Effect Sizes**

| | | Standardizer$^a$ | Point Estimate | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Nella pagina precedente ho visto una foto creata artificialmente di un prodotto alimentare | Cohen's d | 1.919 | 1.061 | .724 | 1.395 |
| | Hedges' correction | 1.928 | 1.056 | .720 | 1.388 |
| | Glass's delta | 2.064 | .986 | .634 | 1.333 |

*2.6*

Group 0 = Viewed Non AI Image

Group 1 = Viewed labeled AI Image

**Group Statistics**

| | AI_NoAI | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Nella pagina precedente ho visto una foto di un vero prodotto alimentare reale | 1.00 | 77 | 3.08 | 2.038 | .232 |
| | .00 | 80 | 4.81 | 1.923 | .215 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Significance | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Nella pagina precedente ho visto una foto di un vero prodotto alimentare reale | Equal variances assumed | .653 | .420 | -5.487 | 155 | <.001 | <.001 | -1.735 | .316 | -2.359 | -1.110 |
| | Equal variances not assumed | | | -5.481 | 153.581 | <.001 | <.001 | -1.735 | .316 | -2.360 | -1.109 |

**Independent Samples Effect Sizes**

| | | Standardizer$^a$ | Point Estimate | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Per favore, indica su una scala da 1 (per nulla d'accordo) a 7 (completamente d'accordo) quanto sei d'accordo con le seguenti affermazioni: – Nella pagina precedente ho visto una foto di un vero prodotto alimentare reale | Cohen's d | 1.980 | -.876 | -1.202 | -.547 |
| | Hedges' correction | 1.990 | -.872 | -1.197 | -.544 |
| | Glass's delta | 1.923 | -.902 | -1.243 | -.557 |

*2.7*

→ **Reliability**

**Scale: ALL VARIABLES**

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 155 | 96.3 |
| | Excluded[a] | 6 | 3.7 |
| | Total | 161 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| .964 | 4 |

*3.1*

→ **Frequencies**

**Statistics**

AI_NoAI

| N | Valid | 161 |
|---|---|---|
| | Missing | 0 |

**AI_NoAI**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | .00 | 80 | 49.7 | 49.7 | 49.7 |
| | 1.00 | 81 | 50.3 | 50.3 | 100.0 |
| | Total | 161 | 100.0 | 100.0 | |

→ **Frequencies**

**Statistics**

Ad_Type

| N | Valid | 161 |
|---|---|---|
| | Missing | 0 |

**Ad_Type**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | .00 | 77 | 47.8 | 47.8 | 47.8 |
| | 1.00 | 84 | 52.2 | 52.2 | 100.0 |
| | Total | 161 | 100.0 | 100.0 | |

### ➡ Univariate Analysis of Variance

#### Between–Subjects Factors

|          |       | N  |
|----------|-------|----|
| AI_NoAI  | .00   | 79 |
|          | 1.00  | 76 |
| Ad_Type  | .00   | 76 |
|          | 1.00  | 79 |

#### Descriptive Statistics

Dependent Variable: WTB_avg

| AI_NoAI | Ad_Type | Mean   | Std. Deviation | N   |
|---------|---------|--------|----------------|-----|
| .00     | .00     | 3.8176 | 1.46800        | 37  |
|         | 1.00    | 4.8274 | 1.58930        | 42  |
|         | Total   | 4.3544 | 1.60608        | 79  |
| 1.00    | .00     | 4.3013 | 1.40157        | 39  |
|         | 1.00    | 3.9257 | 1.70870        | 37  |
|         | Total   | 4.1184 | 1.55963        | 76  |
| Total   | .00     | 4.0658 | 1.44532        | 76  |
|         | 1.00    | 4.4051 | 1.69714        | 79  |
|         | Total   | 4.2387 | 1.58277        | 155 |

#### Tests of Between–Subjects Effects

Dependent Variable: WTB_avg

| Source          | Type III Sum of Squares | df  | Mean Square | F        | Sig.   |
|-----------------|-------------------------|-----|-------------|----------|--------|
| Corrected Model | 24.895[a]               | 3   | 8.298       | 3.472    | .018   |
| Intercept       | 2750.228                | 1   | 2750.228    | 1150.699 | <.001  |
| AI_NoAI         | 1.688                   | 1   | 1.688       | .706     | .402   |
| Ad_Type         | 3.886                   | 1   | 3.886       | 1.626    | .204   |
| AI_NoAI * Ad_Type | 18.544                | 1   | 18.544      | 7.759    | .006   |
| Error           | 360.898                 | 151 | 2.390       |          |        |
| Total           | 3170.625                | 155 |             |          |        |
| Corrected Total | 385.793                 | 154 |             |          |        |

a. R Squared = .065 (Adjusted R Squared = .046)

**Estimates**

Dependent Variable:  WTB_avg

| Ad_Type | AI_NoAI | Mean | Std. Error | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower Bound | Upper Bound |
| .00 | .00 | 3.818 | .254 | 3.315 | 4.320 |
| | 1.00 | 4.301 | .248 | 3.812 | 4.790 |
| 1.00 | .00 | 4.827 | .239 | 4.356 | 5.299 |
| | 1.00 | 3.926 | .254 | 3.424 | 4.428 |

**Pairwise Comparisons**

Dependent Variable:  WTB_avg

| AI_NoAI | (I) Ad_Type | (J) Ad_Type | Mean Difference (I–J) | Std. Error | Sig.[b] | 95% Confidence Interval for Difference[b] | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| .00 | .00 | 1.00 | −1.010[*] | .349 | .004 | −1.699 | −.321 |
| | 1.00 | .00 | 1.010[*] | .349 | .004 | .321 | 1.699 |
| 1.00 | .00 | 1.00 | .376 | .355 | .291 | −.325 | 1.077 |
| | 1.00 | .00 | −.376 | .355 | .291 | −1.077 | .325 |

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

**Univariate Tests**

Dependent Variable:  WTB_avg

| AI_NoAI | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| .00 | Contrast | 20.059 | 1 | 20.059 | 8.393 | .004 |
| | Error | 360.898 | 151 | 2.390 | | |
| 1.00 | Contrast | 2.679 | 1 | 2.679 | 1.121 | .291 |
| | Error | 360.898 | 151 | 2.390 | | |

Each F tests the simple effects of Ad_Type within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

*3.3*

**→ T-Test**

[DataSet1] /Users/alex/Downloads/MAIN STUDY_June 2, 2024_21.39.sav

**Group Statistics**

| | Ad_Type | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| WTB_avg | .00 | 76 | 4.0658 | 1.44532 | .16579 |
| | 1.00 | 79 | 4.4051 | 1.69714 | .19094 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Significance | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference | Lower | Upper |
| WTB_avg | Equal variances assumed | 1.220 | .271 | −1.338 | 153 | .092 | .183 | −.33927 | .25366 | −.84040 | .16186 |
| | Equal variances not assumed | | | −1.342 | 150.802 | .091 | .182 | −.33927 | .25287 | −.83891 | .16036 |

**Independent Samples Effect Sizes**

| | | Standardizer[a] | Point Estimate | 95% Confidence Interval | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| WTB_avg | Cohen's d | 1.57873 | −.215 | −.530 | .101 |
| | Hedges' correction | 1.58652 | −.214 | −.528 | .101 |
| | Glass's delta | 1.69714 | −.200 | −.516 | .117 |

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

*4.0*

InfoAd_ NoAI



ESPLORA I VANTAGGI NUTRIZIONALI DEL NOSTRO HAMBURGER A BASE VEGETALE, RICCO DI PROTEINE E FIBRE ESSENZIALI PER IL TUO BENESSERE. OGNI BOCCONE È STUDIATO PER OFFRIRTI IL MASSIMO DEI BENEFICI SALUTARI, SUPPORTANDO ATTIVAMENTE IL TUO STILE DI VITA ATTIVO E CONSAPEVOLE

ESPLORA IL PIACERE DI MANGIARE SANO CON IL NOSTRO
HAMBURGER A BASE VEGETALE,
UN VERO ABBRACCIO DI SAPORI CHE SCALDA IL CUORE.
OGNI BOCCONE È STUDIATO PER FARTI AVVOLGERE DA
UN'ESPLOSIONE DI GUSTI SUPPORTANDO LA TUA FELICITÀ E
L'AMORE PER TE STESSO

Esplora i vantaggi nutrizionali del nostro hamburger a base vegetale, ricco di proteine e fibre essenziali per il tuo benessere. Ogni boccone è studiato per offrirti il massimo dei benefici salutari, supportando attivamente il tuo stile di vita attivo e consapevole

Esplora il piacere di mangiare sano con il nostro
hamburger a base vegetale,
un vero abbraccio di sapori che scalda il cuore.
Ogni boccone è studiato per farti avvolgere da
un'esplosione di gusti supportando la tua felicità e
l'amore per te stesso

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