



The Minds of Customers Through the Lens of Neuromarketing and Behavioral Sciences

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The main goal of this thesis development work is to investigate how to utilize neuromarketing and behavioral sciences to improve and develop marketing strategies. The thesis explores what areas and methods need to be considered to understand better and predict consumer behavior, while developing marketing strategies for the case company. The development work's goal was to provide new ideas and recommendations to develop marketing strategies when it comes to content creation, copywriting, and marketing tactics in general. The primary goal is to gain a deeper understanding of consumer behavior, enabling the company to optimize its campaigns, improve product design, enhance customer experiences, predict consumer choices, and allocate resources more efficiently.

To achieve these objectives, the thesis begins with a review of the case company's current position and future product offerings in the life coaching industry. It then establishes a literature review, drawing from neuromarketing and behavioral sciences, to inform and guide the development of innovative and efficient marketing strategies. The insights from neuromarketing and behavioral sciences provide a deeper understanding of consumer behavior, thereby enabling the development of more potent and persuasive marketing tactics and strategies. The research endeavors to explore how the synergy of neuromarketing and behavioral sciences can be harnessed to improve marketing methods.

This thesis functions as theoretically oriented research, combining insights and results from various research studies, academic articles, and books with cutting-edge neuromarketing approaches, providing a holistic view of consumer behavior. The research then introduces a spectrum of strategies derived from these disciplines that have proven instrumental in real-world marketing practices. The thesis aimed to develop the marketing strategies by collecting qualitative data by selecting appropriate data from primary and secondary sources, critically analyzing and assessing the findings, and lastly interpreting the findings for the development work. Finally, the research culminates in the presentation of conclusive insights, recommendations, and prototypes to enhance the case company's marketing strategies, facilitating a more efficient and resource-saving approach to achieving business growth.

The thesis presents conclusive findings and recommendations designed to transform the case company's marketing approach. These insights enable greater campaign efficacy, improved product-market fit, and resource optimization, which are necessary for the growth of this emerging business. By harnessing the power of neuromarketing and behavioral sciences, the case company and similar companies can unlock a more profound understanding of its target audience and achieve a competitive edge in the market.

Keywords: Neuromarketing, marketing, consumer behavior, behavioral science, consumer neuroscience, marketing strategies

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1 Introduction

In today's increasingly competitive market, businesses continuously seek innovative ways to connect with their target audience and predict consumer behavior. Traditional marketing techniques are often based on assumptions about consumer preferences and decision-making processes, leading to hit-or-miss strategies. While traditional marketing methods also provide valuable information, they can often fall short of capturing the true essence of consumer behavior, which is driven by subconscious and emotional factors. As John Wanamaker famously said: *"Half the money I spend on advertising is wasted; the problem is I don't know which half"*.

The emergence of neuromarketing and the integration of behavioral sciences have opened new opportunities for marketers to understand and utilize the subconscious drivers behind consumer behavior (Harhut, 2022; Renvoisé & Morin, 2007). This thesis combines neuromarketing and behavioral sciences insights to better understand consumer behavior and create more impactful and persuasive marketing tactics and strategies. This thesis explores how neuromarketing and behavioral sciences can be utilized to enhance marketing efforts.

The challenge for traditional marketing research is that consumers sometimes think or know how they feel or act how they say they act. Therefore, neuroscientists hope that cognitive neuroscience can offer better and more honest indicators of consumers and their preferences, whereas traditional marketing research methods could be unreliable. (Senior et al., 2007; Spence, 2019)

Neuromarketing has been utilized to seek insights and information beyond what can be revealed using traditional techniques, such as surveys, ethnography, or experiments. Neuromarketing aims to improve marketing theories and practices (Plassmann et al. 2015; Yoon et al. 2012) or to improve the accuracy of predicting consumers' preferences and their behavior while combining the information gathered from traditional techniques (Boksem and Smidts 2015; Smidts et al. 2014; Venkatraman et al. 2015).

This thesis aims to better understand consumer behavior, utilizing the insights that neuromarketing and behavioral sciences can provide to make marketing techniques more efficient and save time and other resources for the case company. A deeper understanding of consumer behavior and neuromarketing insights can help with optimizing marketing campaigns and strategies, improving product design, enhancing customer experience, helping predict customers' choices, and businesses are able to allocate their marketing budgets more efficiently. As the case company is a small new business, it is crucial to use all resources including marketing activities as efficiently as possible for the business to grow.

To achieve these objectives, this thesis begins with a brief introduction of the case company, a small new life coaching business, and its product offering for the future. The thesis includes a literature review covering neuromarketing and behavioral sciences as a concept and introducing various strategies emerging from those fields that have been found useful in marketing practices. Finally, the research work in the thesis provides conclusive ideas, recommendations, and prototypes in order to develop and improve the case company's marketing strategies. The thesis' premise is a clear vision of developing the case company's marketing strategies, aligning it with the thesis topic.

2 Methodology

The idea for the thesis topic arose from the author's own interest in marketing and consumer behavior, with a deep interest especially in neuromarketing and behavioral sciences. The collaborator (owner of Company X) was already familiar to the author, therefore had been chosen as the collaborator based on previous discussions before starting the thesis. The previous discussions had included some concerns around starting a new business and its marketing strategies, making the company the perfect collaborator for the topic of the thesis. The business owner has been an entrepreneur for few years, and therefore the traditional marketing styles and actions were already familiar, giving the business owner a better footing to the topic of the thesis, that digs deeper into the world of marketing, being also in the case company's interest.

This thesis and its research included activities suited for the topic of the thesis, some activities overlapped with each other to enable the research to have the most efficient process considering the research problem. The thesis process included firstly defining the research problem; how to better understand consumer behavior and create appealing marketing strategies, and tactics based on that information.

The next steps in the process were selecting appropriate data, including qualitative data from primary and secondary sources, then critical analysis and assessment of the findings, and lastly, data interpretation for the development work. The primary data included interviews and discussions directly with the case company to gain information and understanding of the business and the challenges that the thesis could provide use for. This thesis selected secondary data from academic books, articles, and research studies regarding neuromarketing and behavioral sciences. Data collected included carefully considered insights and tactics from academic literature and various research studies. The material for the research was gathered based on the relativity to the research problem, and the chosen tactics and insights were proven valid and valuable in numerous studies and were also conducted in real-life marketing strategies.

After collecting the data, the findings were analyzed and assessed how they could be useful for the case company. For the analyzing process, critical analysis was used to evaluate the research findings. Data was then interpreted for the case company's industry, and the development work used the interpreted data to construct the manual for the development phase.

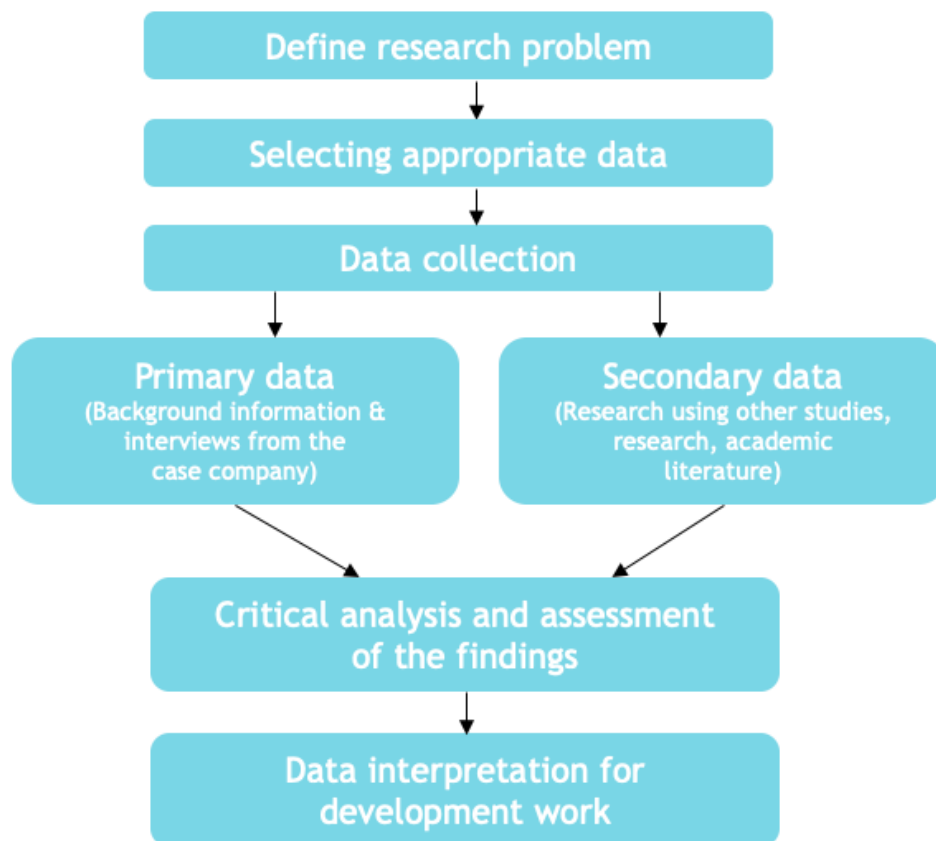


Figure 1: Thesis research process

The primary data collected for the thesis was via interviewing the business owner of the company. The author of the thesis arranged two meetings with the case company, first one in the beginning of the thesis process, and the second in the later stage, presenting the insights and prototypes for feedback. In the first meeting, the owner was interviewed briefly about the business model in general, the ideal future of the business and the current challenges regarding business growth and marketing practices. The current marketing activities and insights drawn from them were also under discussion and will be presented more in Chapter 3 that covers the case company and its business.

The reason why there was only a need for two larger meetings, was because the author already had some extensive background information about the company and its previous activities, due to the business and its owner being already familiar to the author. Therefore,

several discussions had taken place about the company's direction and challenges before the thesis, making the cooperation with the case company straightforward, interactive, and close throughout the process.

In the first meeting, the interview and discussions were focused mainly on the business's current situation and marketing practices, the target group, and how the company's operations and offering are aimed to grow in the future. The business owner is already experienced in social media and content creation, but less experienced with more extensive marketing practices. The interview and discussions confirmed how the topic of the thesis could provide useful and deeper understanding into why and what kind of marketing strategies should be chosen, also providing helpful information and insights to the company.

In addition of collecting primary data from the business owner, the rest of data was collected from academic literature and research findings regarding consumer behavior, decision-making, neuromarketing, and behavioral sciences around marketing. The core concept is to identify what kind of marketing tactics can add value to a marketer and a business in general based on information that could not be generally found via traditional marketing research and studies, such as customer surveys or focus groups.

The research from data collection is an important step in gathering information and data from academic literature and research studies for understanding and insights on essential cues and tactics for developing work relevant to Company X's industry. The exploratory nature of this research is vital for the research problem, as it enables a broader and deeper understanding of consumer behavior, offering proven insights that can be utilized in Company X's strategic planning. This type of approach enables us to collect versatile data and allows us to focus on information that would generally be challenging for a smaller business to collect, also allowing us to have a broader understanding and to help decision-making when it comes to marketing strategies.

When enough data was collected, the data and findings were critically analyzed and assessed based on the relativity to the research problem, and the chosen tactics and insights in the literature were proven valid and valuable in numerous studies and were also proven to be conducted in real-life marketing strategies. The analysis examined the effective utilization of mirror neurons, ways of copywriting, and various print advertisements from big global companies and how they have utilized similar information that the thesis examines.

The critical analysis was focused on scientific validity, e.g., what theories were proven effective in marketing strategies, consumer insights, effective formulation of marketing messages and content. The critical analysis of the findings helped to identify the feasible theories and patterns of decision-making and enhance understanding of consumer behavior.

The analyzes are included in the literature review and development work to avoid too much repetition in the thesis, causing some overlapping of the processes.

Critical analysis enables us to understand and analyze data, theories, and findings within our particular field of study. Critical analysis also enables us to gain better clarity on the issues and information processed. The vitality of academic disciplines is sustained through ongoing reflection, discussion, and enhancement of ideas. Therefore, critical analysis plays an important role in the persistence and revitalization of all fields of inquiry. (Browne & Keeley, 2012)

After the critical analysis, the thesis gathered the most relevant insights and tactics for the case company by formulating preliminary assumptions that were the focus points in the following stages of the thesis. The interpretations and assumptions contributed to the developmental phase, where the manual and prototypes were formulated. The literature review and the developmental phase were mainly focused on understanding how the brain works when making decisions and behavioral cues regarding mirror neurons, loss aversion, scarcity principle, social proof, autonomy bias, and storytelling.

The information and insights from the research were compiled into a brief manual in the development-phase of the thesis. The development work drawn from the research included various ideas crafted directly to the case company, such as copywriting ideas and examples, how to utilize mirror neurons in video content, and prototypes for website, advertisements, and posts for social media.

After preparing the development work including the insights, the ideas and prototypes were presented to the case company in the final meeting, at the end of the thesis process. The content of the thesis was presented to the Company X, including the ideas and prototypes based on the research. The prototypes and ideas were all formulated to match the case company's industry, but moreover the development work is also broadly transferable to targets outside the thesis' actual target.

All of the presented insights, information, suggestions, and prototypes are meant to complement traditional marketing activities and research to gain a broader understanding of consumers' decision-making. The aim of the thesis is to gain information and insights that would not be possible to gather from traditional marketing studies. The gathered information provides various ideas and suggestions based on data and research findings from consumer behavior to develop and improve marketing activities and better predict consumer behavior and buying decisions.

3 The Case Company and its Business

This chapter presents the case company, giving some background on the business and the industry, then going into more detail about the current service offering and the possible offering in the future. The case company is a small Finnish business focusing on life coaching. Company X started its business in 2022, and it is still at a growing stage. Currently, the offering is focused on personal one-to-one sessions. However, the long-term goal is to offer various services, from 1:1 coaching sessions to VIP packages, including work done at home and 1:1 meetings, online courses, and seminars to serve individuals' and groups' varying needs and goals. Since the sessions spent with each client vary from weeks to months, it is crucial for the business to keep finding new clients alongside current ones.

Company X has focused on Instagram and TikTok for marketing communications to gain more visibility. The insights from social media marketing so far have shown that Company X's content engagement has been slightly better in TikTok; therefore, the marketing activities have been more active on that platform. One challenge that TikTok's algorithm brings is that the algorithm shows the content primarily to the Finnish audience despite various efforts to change the algorithm. The case company aims to offer its services in Finnish and English; therefore, it is preferable that the audience is not limited to Finnish consumers. Instagram's algorithm has been shown to be more flexible in that regard. In that platform, the language of the content has been Finnish and English.

When it comes to the content in social media marketing, it has been shown that the engagement and number of views are far better when the critical information is given in the first second when the video starts. Similar insights have been discovered in videos that have been found relatable to the viewer, such as videos covering relationships.

Life coaches help their clients achieve their goals, overcome challenges, and make changes in their lives. Life coaches work with their clients as their partners, knowing their clients have the answers to create the changes they seek. (Richards, 2020) Life coaching as a method has been proven beneficial when it comes to enhancing personal insights and shaping or reinforcing desired behavior. (Ammentorp et al., 2013)

Life coaching in recent years has received attention as a method of improving behaviors and enforcing healthy lifestyles (Ammentorp et al., 2013). Life coaches are quite different from therapists; therefore, they cannot be entirely compared. Life coaches do not analyze the past, and life coaching does not include traditional cognitive therapy. Instead, life coaches use clients' natural desire to support change. They help their clients to move on from the past, increase their self-confidence and self-esteem, and promote hope, personal growth, and a clearer vision of their future. Coaches offer their clients a secure and unassuming environment where they can discover a life pathway they create. (Richards, 2020)

Life coaching has been developed from various disciplines and is based on extensive academic knowledge, including cognitive and behavioral psychology, social science, positive psychology, and organizational change and development. There is no exact definition for life coaching. However, the method has been described as “unlocking a person’s potential in maximizing their performance” in encouraging clients to be better aware of their creativity and find their own solutions by focusing on the present and the goal in mind. (Ammentorp et al., 2013; Grant & Stober, 2006)

The goals of life coaching are continuous cognitive, emotional, and behavioral changes that facilitate achieving goals and improving performance. A life coach helps their clients with the approach that our attitudes and judgments determine our behavior, decisions, and feelings. Thus, the coach helps clients to remove their distortions of thinking and enables them to learn alternative ways and approaches to improve their decision-making and achieve their goals. (Grant & Stober, 2006) Life coaching methods assume that the most important issues for the client are self-identified and prioritized. Therefore, the client chooses the topic, the action, and the results they want to accomplish. In addition, life coaching is defined as focusing on a person's whole life and focusing on well-being instead of pathology. (Ammentorp et al., 2013; Williams & Davis, 2007)

4 Introduction to Neuromarketing

Neuromarketing is an emerging field combining the study of consumer behavior with neuroscience. As Stanton et al. (2017) explain, neuromarketing uses neuroscience and physiological research techniques to gain new insights into consumer behavior and decision-making and other aspects regarding human cognition and behavior related to marketing. Neuromarketing seeks insights and information that go beyond traditional techniques such as surveys, focus groups, etc. The aim is to improve marketing theories and practices and/or the accuracy of predicting consumer behavior and preferences combined with traditional marketing techniques.

Neuromarketing is still a relatively new field of study, but the field has gained credibility and has been incorporated among advertising and marketing professionals. Companies spend each year more than 400 billion dollars on marketing campaigns. However, traditional test methods and forecasting the effectiveness of those investments have been challenging since they depend on consumers’ ability and willingness to describe their feelings and experiences when exposed to an advertisement. Neuromarketing can offer cutting-edge methods for directly exploring consumers' minds without demanding cognitive or conscious involvement. (Morin, 2011) In 2010 alone, there were approximately 90 private neuroscience labs globally performing studies related to consumer behavior and their attitudes. In addition, there are

also university centers occasionally venturing into those industry-sponsored research studies. (Zurawicki, 2010)

Gill & Singh (2022) disclose that the idea of Neuromarketing was created at Harvard University in 1990 by therapists. The applications of neuromarketing started to appear organically around 2002. During that time, a few companies in the United States, such as Brighthouse and SalesBrain, were the first ones in the U.S. to offer neuromarketing research and consultation advocating the use of knowledge from the cognitive neuroscience field. (Morin, 2011)

According to Morin (2011), the first scientific neuromarketing study was conducted by Dr. Montague, a Professor of Neuroscience at Baylor College of Medicine, in 2003 and published in *Neuron* in 2004. His study was focused on Coca-Cola and Pepsi. The study had a group of people drinking either Coca-Cola or Pepsi while an fMRI machine was scanning their brains. (McClure et al., 2004) The study revealed that different parts of the brain light up if people are aware or unaware of the brand they are consuming. Notably, the study suggested that such a strong brand like Coca-Cola has the power to “own” a piece of our frontal cortex. The frontal lobe is considered the seat of our executive functions (later EF for short). The frontal lobe controls our attention and short-term memory and even does the best of our thinking, especially when it comes to planning. The study showed that when people knew they were drinking Coca-Cola, they said that they preferred Coca-Cola instead of Pepsi, and their EF lighted up. However, when people were not aware of which brand they were consuming, they reported to prefer Pepsi over Coca-Cola. In this latter case, the most active part of the brain was not the EF anymore but an older structure in the limbic system. This area in the brain controls our emotional and instinctual behavior. This study might not have been extraordinary enough to convince all marketing researchers that neuroscience can solve the neural code of our decisions. However, it indeed was enough to demonstrate its potential power. While the study’s findings were interesting, Dr. Montague was unable to provide any rationale for how our brains process brand choices. (McClure et al., 2004; Morin, 2011)

This thesis considers neuromarketing and other behavioral science fields as one of many tools allowing us to improve our predictions about customers’ behavior and preferences. Neuroscience alone does not unlock hidden secrets about consumers’ decisions, but it helps us to understand consumer behavior from another perspective, and combined with other marketing techniques, it helps us to make better and more informative decisions when it comes to marketing.

4.1 Neuromarketing techniques

Various techniques are used in the field of neuromarketing, and this thesis will mainly cover the most used techniques. One of those techniques is functional Magnetic Resonance Imaging

(fMRI), which measures the amount of deoxygenated hemoglobin. This measure is closely linked to aspects of neuronal activity, which allows fMRI to describe brain functions with great spatial and temporal resolutions. In other words, fMRI can measure the amount of oxygenated blood throughout the entire brain and pinpoint an area very precisely in millimeters. (Lindström & Underhill 2010; Stanton et al., 2017)

Whenever the brain is operating on a specific task, it needs more fuel, mainly oxygen and glucose. The harder an area of the brain works, the bigger its fuel consumption is; therefore, there is a greater flow of oxygenated blood in that region. Thus, fMRI can show that when a part of a brain is used, the region will light up like a hot flare. By tracking this activation, researchers can see which specific areas of the brain are active at a given time. However, studying consumer behavior using fMRI can be quite expensive because the machine costs over \$4 million, and the costs associated with each person tested are typically hundreds of US dollars. (Lindström & Underhill 2010; Stanton et al., 2017)

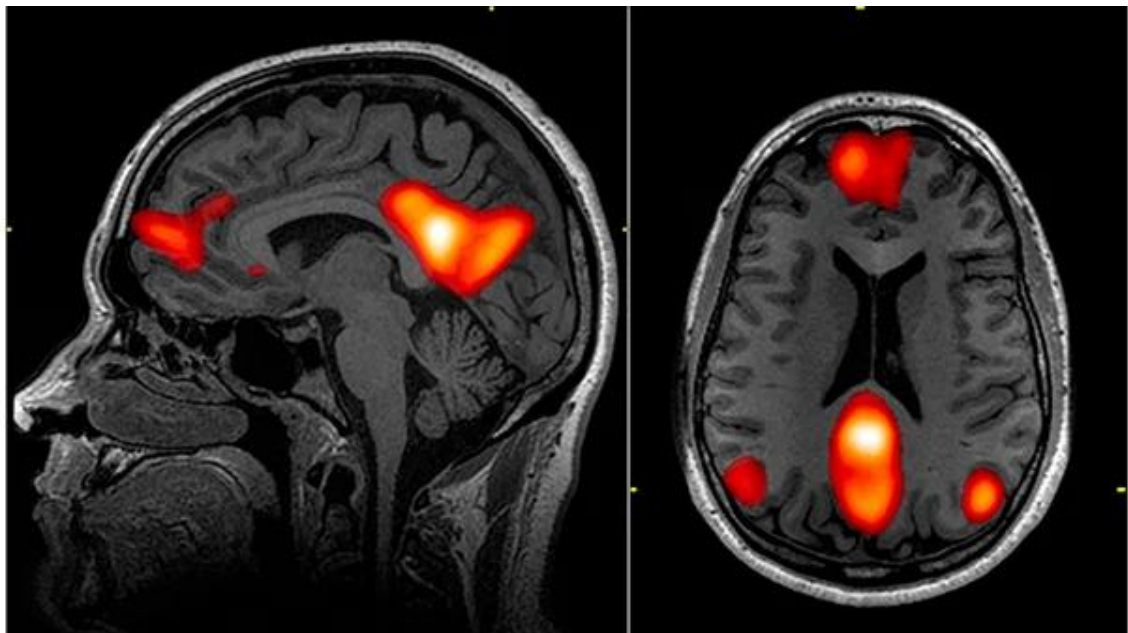


Figure 2: Picture of an fMRI brain scan (McGreevey, 2017)

Another (and less expensive) way of measuring brain activity is electroencephalography (EEG). It has been a very popular diagnostic tool for brain disorders for a long time. It can measure changes in electrical activity in the brain using electrodes placed on the scalp. When comparing it to the fMRI, EEG has poorer spatial resolution, which means it is more difficult to pinpoint the areas of brain activity. EEG also does not have the ability to measure brain activity significantly distal to the skull, such as subcortical areas that are common areas of interest to those studying decision-making. (Stanton et al., 2017; Zurawicki, 2010)

In addition to previously mentioned techniques, some practitioners also might use PET (positron emission tomography), MEG (magnetoencephalography), TMS (transcranial magnetic stimulation), NIRS (near-infrared spectroscopy), or face reading via analyzing micro-movements of the facial muscles to detect emotions and their changes. (Zurawicki, 2010)

These brain imaging techniques can also measure changes in brain activity associated with thoughts linked to financial decisions, sensory experiences such as seeing and/or tasting a product, and many other marketing phenomena. There are alternative options for brain imaging that researchers can use to measure various aspects of peripheral physiology, for example, heart rate, respiration, eye tracking (recording precisely what the consumer is looking at), skin conductance (hand sweat), or pupillometry (pupil dilation). With these alternative techniques, researchers can connect the measured side of physiology with consumers' experiences. For example, one could even measure the link between an individual's testosterone levels and their readiness to make risky financial decisions. (Stanton et al., 2017)

Neuromarketing research can be expensive to conduct, especially for fMRI or the less expensive but still costly EEG. Some researchers are even using hormone measurements in their research, but it is still not widely used in the industry. Eye tracking has become quite popular in the industry because of its low cost, ability to be conducted in many locations, and close link to advertising. New versions of EEG are emerging. A company called NeuroFocus introduced wireless EEG that people can wear in more naturalistic settings. New companies are continuously emerging, offering more inexpensive tools for the industry. Ultimately, the validity of the data coming from those tools depends on the competency and training of those who collect and interpret that data. (Stanton et al., 2017)

As the neuromarketing techniques and tools can be expensive and difficult to find, making independent neuromarketing studies challenging to conduct. The techniques previously mentioned are presented to give a deeper understanding of how the information obtained from neuromarketing studies differs from traditional marketing studies, and how this thesis can still utilize the information drawn from the neuromarketing studies. This way we can efficiently discover similar information and findings from consumer behavior as larger corporations who are more resourceful with their marketing research.

4.2 Ethical Aspects of Neuromarketing

Using neuroscience techniques in marketing is stated to create a better understanding of the brain and other physiological mechanisms regarding consumer behavior and decision-making. As a growing field of study, the volume of academic research and neuromarketing consulting companies have been growing steadily despite the criticism they have faced (Plassmann et

al., 2012). This chapter presents the most common ethical concerns related to neuromarketing in its current form and focuses on the potential risks for consumers and ethical decisions made by organizations.

The criticism regarding neuromarketing has often focused on its possible unethical research practices and/or technologies, such as manipulating consumers. The criticism often refers to possible risks of harm regarding autonomy and violation of rights, including immediate effects on consumers as individuals, as well as long-term effects on society. (Stanton et al., 2017)

Some of those fears are spread widely, carrying the signs of ethical challenges, and Stanton et al. (2017) disclose that most of those fears do not raise realistic ethical problems. Some of these fears around neuromarketing are not that distinctive since they do not involve any new controversies beyond what comes from traditional marketing (Nill & Schibrowsky, 2007). The newest ethical risks can be unrealistic since they have assumed that neuromarketing could have powers that it could not obtain in the future. Of course, some realistic ethical issues have risen (Stanton et al., 2017), which we will discuss next.

4.2.1 Predicting and Influencing Consumer Choices

The first and most common ethical implication is the fear of rendering consumers' choices to be entirely predictable. Traditional marketing research and practices have received similar criticism, but they are perhaps more accentuated in the field of neuromarketing (Wilson et al., 2008). Knutson et al. (2007) demonstrated in their research that brain activity can even predict consumer choices (for food) beyond self-reported information about their preferences, showing that neuromarketing could significantly contribute to traditional marketing research. If methods of neuroscience can provide a port into the minds of consumers and extract information that even those consumers themselves do not know yet, it can be argued that neuromarketing could offer a tool to identify our choices before we have made those choices ourselves. (Stanton et al., 2017)

However, these findings were found only in experimental research studies; therefore, this fear is unrealistic for standard day-to-day settings since people do not usually have their brains scanned daily. Thus, consumers as individuals are not direct subjects of privacy violation in this case (Murphy et al., 2008). It is crucial to remember that the participants in academic research have gone through an informative consent process and are informed about the risks and goals of the study. The conclusions drawn from these studies are based on generalizations from a small experimental sample. Predicting consumer behavior is entirely different from coercing customers against their own will. Therefore, prediction does not need to deny or undermine the rationality of the individuals or groups whose behavior is being predicted (Stanton et al., 2017).

Another commonly observed potential ethical problem is the fear that, with the help of neuromarketing, it is possible to go beyond predictions and influence consumers' decisions. It is argued that successful neuromarketing could possibly take control away from consumers and make marketed products too irresistible for them. Although shaping consumers' choices is the goal of marketing in general, it is feared that neuromarketing could offer companies a unique ability to find the "buy button" in the brain. (Stanton et al., 2017)

Where neuroscience could help improve to predict consumers' choices, there is currently no evidence of a "buy button" in the brain. There are areas in the brain coding for value and reward, especially the anticipation of reward (Clithero & Rangel, 2014), and some things can activate these areas better than others. However, it cannot be compared to a "buy button." Neuromarketing cannot offer a specific way to optimize marketing messages in a way that would make people unable to control their decisions. (Murphy et al., 2008)

It is still argued that even if neuromarketing cannot coerce consumers to buy specific goods, it can still influence purchases, and it seems unethical when consumers are being influenced below the level of consciousness. Recent research has demonstrated that supraliminal but unattended primes can affect consumer behavior. In a study conducted by Ferraro et al. (2009) manipulated the number of times the participants were exposed to pictures of Dasani water. Later, the participants were able to pick one bottled water of four different water brands, including Dasani. The participants who were exposed to Dasani repeatedly but needed to be conscious of the brand they were exposed to were more likely to choose the Dasani brand than the other three options. (Ferraro et al., 2009; Stanton et al., 2017)

These kinds of studies show that behavioral research can uncover ways to affect consumer choices outside of their awareness. They also demonstrate that neuromarketing does not deserve any particular moral opposition and is not the only way to influence consumers outside of their conscious awareness. Even when repeated photos of Dasani water have influenced a consumer, it cannot prove they did not have control over the water they picked. If the participant did not want to choose Dasani or preferred another brand, they could pick another one. Consumers could have more control when they know what has influenced them, but it does not mean that they lack all control if they are not fully aware of what is influencing them. We might not always be aware of all the factors that are influencing us, but we still make free choices. (Ferraro et al., 2009; Stanton et al., 2017)

4.2.2 Ethical Implications of Combining Neuroscience and Marketing

When it comes to academic and industrial neuromarketing, they have quite different goals. Researchers' primary goal is to publicly spread the knowledge, including publishing protocols and data in peer-reviewed journals. In comparison, the industry's primary goal is to build a competitive advantage, leading to private data collection and developing their own analysis

methods. Researchers and industry also have different approaches when it comes to interpreting and implementing the results. (Stanton et al., 2017)

Researchers conduct studies and evaluate their results using strict thresholds, which protect against the possibility that their findings are due to chance and will not represent a truly significant result (for example, it is common to use a tolerance of less than 5% that the results of the experiment are false). Whereas in the industry, forecasting is key, and a 75% chance of predicting an outcome can be a risk worth taking for a managerial decision involving considerable sums of money. As a result, those differing priorities and approaches may be exposed to ethical challenges for both academic and industry neuromarketing researchers. (Stanton et al., 2017)

Naturally, there are also ethical concerns that are shared both in neuromarketing and traditional marketing. Even if some ethical issues are not specific to neuromarketing, there could still be issues equal to traditional marketing and neuromarketing. For example, a shared issue for consumers could be increasing prices. Customers may need to pay more for a product if it is more expensive due to the expenses of neuromarketing studies or if those studies can give better pricing power to the company. (Plassmann et al., 2008; Stanton et al., 2017)

Another feasible ethical issue for both marketing and neuromarketing is fueling consumerism. Let us imagine neuroscientists testing potential ads to decide which designs have the desired effects on attention and purchasing motivation. As long as the only effect is for the consumers to pick one equally good or a better product over another, already searching for a product to fill a particular need, it is not fueling consumerism. However, stronger ads could be harmful if they constantly create new desires for better products that the consumer does not need. The fear is that neuroscience could make ads more powerful and, therefore, could create new desires in ways that are harmful to consumers' lives. (Stanton et al., 2017) It is important to keep in mind that this same concern is also valid when it comes to traditional marketing; therefore, it is not a power that only neuromarketing methods are capable of.

Another legitimate concern is the ability of marketing and neuromarketing to exacerbate poor decision-making or increase the likelihood of purchasing products that could be more beneficial for the customer. For example, considering smokers or others addicted to cigarettes and whose cravings increase the brain's response to smoking cues, such as seeing pictures of cigarettes. In the product development phase, fMRI could allow cigarette companies to test new cigarette varieties or ads that could activate reward-related brain areas. Such practices could be ethically questionable due to the link between smoking, cancer, and other health issues (Stanton et al., 2017). However, these ethical issues have been around for a long time, even just for traditional marketing practices.

While some of these issues have raised moral doubts about neuromarketing, these same moral concerns and issues should arise just as strongly when referring to traditional marketing, which has little to do with neuroscience alone (Stanton et al., 2017). Neuromarketing does not hold special powers that cannot be obtained later in the future. Naturally, any vulnerable and niche populations that are more open to influence should be protected from any kind of possible marketing exploitations (Murphy et al., 2008), whether the case is traditional marketing or neuromarketing tactics.

4.2.3 Benefits to Consumers from Neuromarketing

When neuromarketing is applied responsibly, it can also enhance consumers' experiences since the fundamental goal of marketing is to understand and address consumers' needs (Stanton et al., 2017). With neuromarketing research providing us with a more profound understanding of consumer needs, companies can use that knowledge to produce more desirable products and services, create more engaging marketing materials, and they are able to improve their customers' experiences. (Plassmann et al., 2008; Reimann et al., 2010)

It is not a secret that enhanced product development using neuromarketing methods can give companies additional potential for profit-making. It is also true that consumers are likely to benefit from it by getting products and services that better suit their needs (Stanton et al., 2017). Another possible advantage of neuromarketing concerns ways to treat addiction, such as compulsive buying disorder. Some have feared that neuromarketing could exacerbate this disorder. However, it has also been suggested that neuroscience methods could help us gain better insights into the neurobiological mechanisms of compulsive buying. These insights could help us develop new ways to treat those suffering from it. (Black et al., 2000; Fortunato et al., 2014)

If neuroscience methods could shed light on the clinical pathologies associated with compulsive buying, it could lead neuromarketing researchers to apply for research funding due to its clinical relevance to an identified behavioral disorder. It would not only add the research capacity for neuromarketing, but it could also make sure that neuromarketing methods could be used for consumers' benefit as well. (Stanton et al., 2017)

Finally, neuromarketing techniques can also be utilized to enhance public safety campaigns. For instance, Falk et al. (2013) used fMRI to determine which brain regions are most active in response to messages most likely to spread socially. This research can be used to evaluate and filter future public announcements and campaigns based on how likely they are to convey the core content of the public safety campaign. Despite neuromarketing's ethical risks, it also has significant potential for good through positive uses like these examples mentioned. (Stanton et al., 2017)

5 The Triune Brain Theory

The Triune Brain concept was pioneered by physician and neuroscientist Paul D. MacLean in 1949 with his publication of *Psychosomatic Disease and the Visceral Brain*. His thoughts arose from his astute attentiveness to psychiatric signs and symptoms. He later discovered a broad spectrum of human epileptic seizures and their causes in the limbic system. Seizures in the limbic structures, such as the hippocampus, caused a variety of uncontrollable feelings and emotions, with strange motor behaviors. (Ploog, 2003)

Most of us are aware that there are differences between the right brain and the left brain. The right hemisphere is the center of conceptual thoughts such as music, art, and creativity. The left hemisphere is the center of linear thinking, for example, logic, language, and mathematics. However, based on the triune brain concept, the brain can be categorized into three parts: the neocortex, limbic, and reptilian. They act as different organs with different cellular structures and even different functions. The three parts of the brain can communicate and influence each other, but each one of them has a separate function. (Bayle-Tourtoulou & Badoc, 2020; Renvoisé & Morin, 2007)

First, the neocortex is the thinking brain, which processes rational data. It is described as the “human” part of the brain and is only approximately 3.6 million years old. It is responsible for logical reasoning, abstract thoughts, and language. The neocortex does the analyzing, reasoning, and anticipating of the future. It also favors the sense of sight over others. In a way, it functions like a computer due to the lack of emotions. (Bayle-Tourtoulou & Badoc, 2020; Renvoisé & Morin, 2007)

Another part of the brain is the limbic brain, which is approximately 65 million years old. The limbic brain is linked to our memory, and it is our feeling brain. It processes our emotions and triggers our stress reactions or alarms. It is also very black and white, separating the world into two parts, such as: “I like” or “I don’t like.” Everything that the limbic brain finds pleasant is registered as an action that is to be repeated. Similarly, everything that the limbic brain disagrees with needs to be avoided. It is our center of affectivity, giving us a sense of family and community. It favors the sense of hearing over others and compares everything with what it has experienced already. (Bayle-Tourtoulou & Badoc, 2020; Renvoisé & Morin, 2007)

Lastly, we have the reptilian brain, which is the deciding part of the brain, taking input from the other two sections into account and acting as the decision trigger (Renvoisé & Morin, 2007). It is responsible for our reflexes and controls homeostasis, the body’s equilibrium, by regulating functions such as heart rate, respiration, body temperature, etc. The reptilian brain is also conservative and has the instinct for imitation. Its actions are often rapid and instinctive, favoring the sense of smell over others. (Bayle-Tourtoulou & Badoc, 2020)

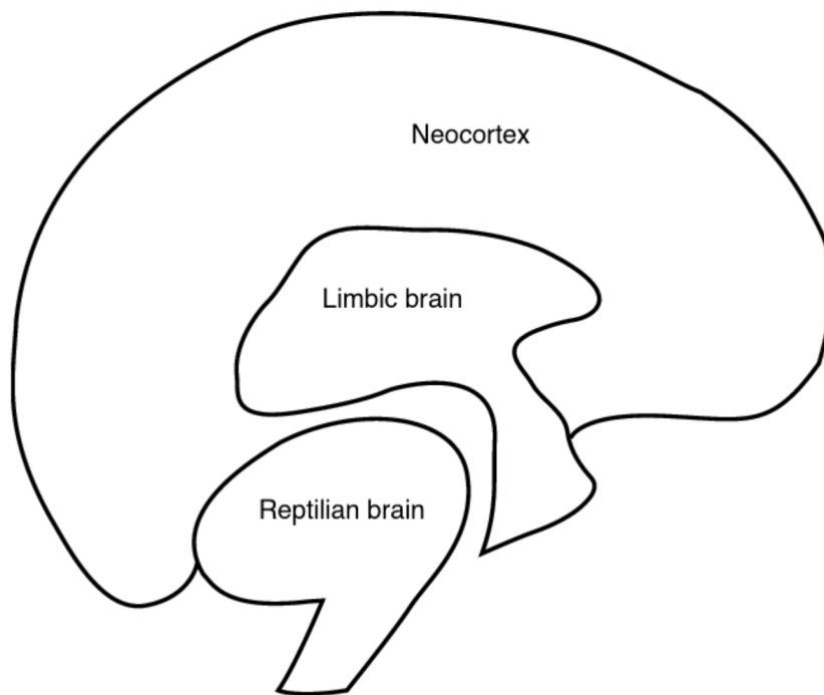


Figure 3: The three parts of the brain (Bayle-Tourtoulou & Badoc, 2020)

5.1 The Reptilian Brain

The reptilian brain is responsible for our reflexes, being our “fight or flight” part of the brain. It is a primitive organ that is only concerned about our survival, as it has for millions of years. It is also called the reptilian brain because it dates to when fish emerged from the water, becoming reptiles. (Bayle-Tourtoulou & Badoc, 2020; Renvoisé & Morin, 2007)

The reptilian brain consists of the brainstem (medulla, cerebellum, pons, globus pallidus, midbrain, and olfactory bulbs), the dominant structure in the brains of lizards and snakes. This part of the brain does not learn well from experience but tends to repeat instinctual behavior again and again in a fixed manner. (Baars & Cage, 2010)

Studies have shown that people are affected by the reptilian brain since it is mainly governed by fear, therefore playing a crucial part in our decision-making processes. The goal for marketers is to help customers overcome those fears to make that purchase decision. The fear could be as small as the risk of paying too much for a product that has not yet been tested. In order to get past that natural fear, marketing campaigns aim to offer subtle reassurance and guarantee. (Gupta, 2021)

The reptilian brain is mainly pre-verbal; therefore, it does not understand complex messages and is able to process visual stimuli without using the visual cortex. Because of this, we prefer using images instead of words or experiences instead of explanations (Morin, 2011). Since humans have used the words “only” for about 40,000 years, it is challenging to try to motivate and inspire our reptilian brain, which is much older, using just words (Renois  & Morin, 2007). A known neuroscientist and author, Antonio Damasio, once said, “*We are not thinking machines that feel, we are feeling machines that think.*” (Morin, 2011)

Overall, humans operate with the reptilian brain in the driver’s seat of our decision-making processes. (Gupta, 2021; Renois  & Morin, 2007) Therefore, our marketing messages must be acceptable to the reptilian brain of our prospects and customers. Hence, the subsequent chapters cover various stimuli to the reptilian brain, making it easier for us to understand how it works and how we can provide marketing campaigns that the old brain can understand with ease.

5.2 The Stimuli of Decision-Making

The reptilian brain responds to six stimuli, and understanding them can help us unlock and better realize our decision-making processes. As marketers, we want to be able to trigger these six stimuli that can reach the actual decision-maker.

Firstly, the reptilian brain is highly self-centered; it does not have any patience or empathy for anything that does not concern its own well-being. This is why marketing messages should be focused on the audience, not the advertiser. “Your” audience wants to know first what you can do for them, and only then might they pay attention to you. This is why advertisers use the word “you” to address the audience directly. (Renois  & Morin, 2007)

The second stimulus is contrast. The reptilian brain is sensitive to clear contrasts, for example, fast/slow, before/after, or with/without. Contrast gives the reptilian brain the possibility to make quick and risk-free decisions. It is wired to observe any kind of disruptions, which can signal important cues to what is happening in our environment. This is why neutral statements, such as “we are one of the leading suppliers of” are useless since it does not help the target audience sort out the information quickly and trigger a decision. (Bayle-Tourtoulou & Badoc, 2020; Renois  & Morin, 2007)



Figure 4: Examples of using contrast in advertising

The third stimulus is tangible input - the reptilian brain will not process written language. Therefore, using lots of complicated words slows down decoding the message itself and gives the responsibility of processing the information to the new brain. Hence, the reptilian brain wants tangible input because it continuously scans for what is familiar, concrete, and recognizable. The reptilian brain does not process concepts such as “a flexible solution” or “integrated approach.” Instead, it prefers simple and concrete ideas that are easy to grasp, such as “more money” or “unbreakable”. (Bayle-Tourtoulou & Badoc, 2020; Renvoisé & Morin, 2007)

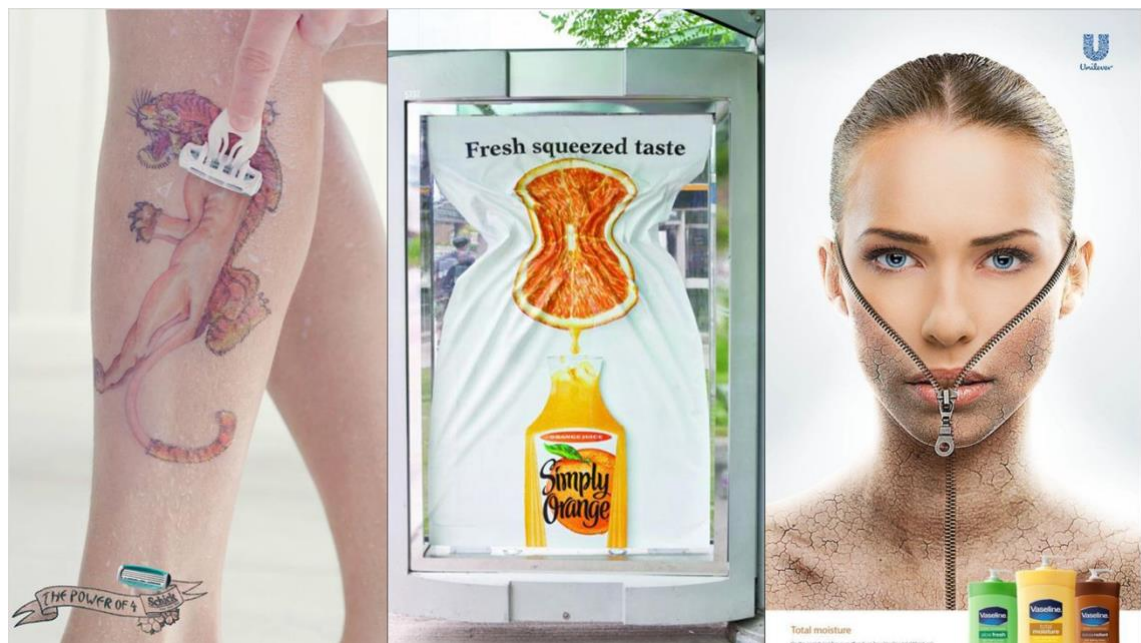


Figure 5: Examples of using tangible input in advertising

Fourth stimulus - beginning and end. Most people remember the beginning and the end of the movies they see and tend to forget the scenes in the middle. Our brains continuously try to save vital energy; therefore, they tend to drop some information during the process. The reptilian brain likes strong openings and finales and might often overlook whatever has been in between. From a marketer's perspective, this is useful to bear in mind when forming and delivering our messages. The most important content needs to be inserted in the beginning and repeating it in the end. Neuroscientists have noticed that those events can trigger one of the most prominent forms of pleasure in our brains, which is anticipation. During the anticipation period, we produce more dopamine in the reptilian brain's reward center. Dopamine acts as a neurotransmitter in our brains, and the change of dopamine raises our attention since it produces a natural high in the brain, improving the ability to remember specific details from the experience. (Bayle-Tourtoulou & Badoc, 2020; Renvoisé & Morin, 2007)

The fifth stimulus - is the visual stimulus. The reptilian brain is very much visual, possibly due to the optic nerve connected physically to the reptilian brain. Neuroscience shows that whenever we see something that might look like a snake, the reptilian brain will warn us of danger in an instant - approximately in two milliseconds. This causes us to react before our neocortex recognizes the object as an actual snake since it takes approximately 500 milliseconds for the visual cortex to recognize it as a snake. We cannot rely on how quickly our neocortex processes information, so we are wired to make decisions mainly based on visual input. (Bayle-Tourtoulou & Badoc, 2020; Renvoisé & Morin, 2007)

The sixth and last stimulus is emotion - the reptilian brain can only be triggered by emotion, and thanks to the field of neurobiology, we now understand better how our emotions work in the brain. Scientific studies have demonstrated that emotions create electrochemical responses in our brains; they directly impact how we process and remember information. Humans have over 100 billion neurons in the brain's gray matter, and they might not be extraordinary. However, when experiencing strong emotions such as joy, anger, or surprise, a cocktail of hormones floods the brain, impacting the synaptic connections between the neurons, making them stronger and faster. Therefore, we remember different events better if they have been experienced with strong emotions. (Bayle-Tourtoulou & Badoc, 2020; Renvoisé & Morin, 2007)

For example, Coca-Cola's *Taste the Feeling* -campaign uses emotional appeal by showcasing moments of joy and connection, evoking positive emotions associated with the brand. Using the same methods, another example, McDonald's uses emotional appeal in their advertisements by showcasing heartwarming family moments, evoking those positive emotions, and reinforcing their positioning as a family-friendly restaurant. Figure 6 below

demonstrates how positive and negative emotions can be used effectively in print advertisements.



Figure 6: Examples of using different emotions in advertising

In conclusion, the reptilian brain:

- Is self-centered - marketing messages and advertisements should be focused on the audience's well-being.
- Likes contrast - before/after, slow/fast, big/small, contrasts help grab the audience's attention.
- Wants tangible input - does not process complex words, likes familiarity and simple ideas and concepts.
- Remembers the beginning and end - overlooks the middle part, therefore, it is crucial to create a strong opening and a finale that the reptilian brain can remember.
- Is highly visual - hence why decisions are mainly based on visual input.
- Is triggered by emotion - we remember events far better whenever we have experienced them with strong emotions.

The positive thing about these stimuli is that they are all universal. Acknowledging and adapting these stimuli can give us better positioning in marketing and improve our ability to communicate, market, and sell our products and services.

6 Neuromarketing and Behavioral Sciences in Marketing

This chapter presents various aspects of neuromarketing and behavioral sciences, from mirror neurons to autonomy bias and storytelling, including how different tactics from neuromarketing and behavioral sciences can and have been utilized in marketing. Because neuromarketing and behavioral sciences often overlap and go hand in hand, we need to understand how the human brain works and how it manifests in consumer behavior.

6.1 Mirror Neurons

Mirror neurons were first discovered in 1992 by Italian scientist Giacomo Rizzolatti and his research team. They were studying macaque monkey brains at the time, hoping to discover how the brain can organize motor behaviors. The macaque monkeys were attached to electrodes to monitor their brain activity. The research team specifically studied the premotor area of the macaque brain, which can register activity whenever monkeys carry out certain gestures, such as picking up nuts. What the researchers found was that macaques' premotor neurons would light up whenever they reached for the nut, but also whenever they saw other monkeys reaching for them. During a break, one of the researchers went outside to get an ice cream cone and returned to the lab to eat it. When he was in the monkey's vision, it turned out that the neurons in the monkey's brain fired as if the monkey itself was eating an ice cream cone. (Bonini, 2017; Harhut, 2022; Lindström & Underhill, 2010)

Later scientific studies have shown that the human brain behaves similarly. When people see someone doing something, their brains react as if they were doing that same action and experiencing that similar feeling. (Harhut, 2022) The fMRI and EEG scans of human brains demonstrate that the mirror neurons in the human brain are located in the inferior frontal cortex and superior parietal lobule. (Lindström & Underhill, 2010) Mirror neurons are the basis of the brain for learning by imitation. (Lacoste-Badie & Droulers, 2014)

This is why sports coaches advise their players to visualize the perfect tennis serve or ideal golf swing. Therefore, mirror neurons have a considerable impact on videos and TV ads, too. However, static images can also be used in to trigger the mirror neurons. For example, pictures of people happily using a product or service, whether it is in an email campaign, a website or landing page, or social posts and ads. (Harhut, 2022)

From a marketers' perspective, the mirror neuron network can be important for two reasons. Firstly, it supports the notion that motivation and attention are central aspects of vicarious learning and that creative promotional strategies can undoubtedly generate a learning effect. Therefore, the creative side of the promotion needs to capture consumers' attention and motivate them to process the information. Secondly, understanding the mirror neuron network system gives marketers the ability to measure the anatomical reactions to marketing activities, which also indicates learning. (Weber, 2007)

The insights regarding mirror neurons have been utilized in marketing in various aspects. Because of mirror neurons, if we keep seeing a similar product over and over again, it can change how we feel about it with time. A particular product that once was not attractive or interesting at all can after some time become something that the same person wants to purchase. Suddenly, the product went from "not interested" to a "must have". Sometimes

just seeing a certain product again and again can make it more desirable. (Lindström & Underhill, 2010)

It is important to understand that mirror neurons do not usually work alone. Often, they work with dopamine, which is one of the most addictive pleasure chemicals in the brain. Buying decisions are partly driven in some way by the seductive effects of dopamine, and when a consumer is about to buy something they desire, dopamine flushes the brain with pleasure. A few minutes after the product has been bought, the euphoric feeling caused by dopamine subsides. (Lindström & Underhill, 2010)

6.2 Loss Aversion

Loss aversion explains the negative changes that have a more significant psychological impact on people than positive ones. Many studies have revealed that a loss has twice the psychological effect of an equivalent gain on average (Tversky and Kahneman, 1992; Pennings and Smidts, 2003; Abdellaoui, Bleichrodt & Paraschiv, 2007). For example, if a person loses €100, the decline in well-being associated with that loss is about twice as significant as the increase in well-being they would have experienced a gain of €100. (Paraschiv & L'Haridon, 2008)

Marketers can utilize loss aversion in various ways. It is not necessarily just about the positive sides that can happen when becoming a customer, but also about the awful parts that could happen to the consumer if they fail to become a customer. In other words, it is about the painful situations that they could easily avoid when becoming your customer. Marketers can balance the benefits with the losses that can be avoided simultaneously. Adding a bit of loss aversion in marketing messages makes them more effective and more likely to prompt the hoped response. From the customer's point of view, being able to avoid a loss or dodge a painful outcome is an advantage in itself. (Harhut, 2022)

From a marketing perspective, fear can be a good motivator, and we also know now that the reptilian brain is motivated by fear (Gupta, 2021). People do not want to lose out on opportunities, such as missing a good deal or a product running out of stock. Another example is consumers possibly fearing that they could be less attractive, popular, or socially accepted if they do not have the trendiest, newest items. These examples are only a few of the ways fear has been utilized in marketing. For instance, travel insurance is bought because it brings peace of mind - people fear losing their money if a trip gets derailed. People might buy another pair of their favorite jeans just in case they cannot be replaced later on or buy a spare key to hide it somewhere useful because they fear they might lock themselves out someday. The concept of fear and being averse to losses is hardwired into humans. (Harhut, 2022)

When it comes to marketing, taking loss aversion into account is essential. Although several studies have shown that it has little effect on the behavior of professional sellers, the concept is important to describe the behavior of consumers in the marketplace. The existence of loss aversion among people can offer good and bad news for marketers. Such consumers can be less likely to switch brands or buy different products; due to their loss aversion, they might be reluctant to renew their items. However, these consumers are also more loyal when compared to consumers who are not that loss-averse. The observed asymmetries in the elasticity of demand in relation to quality and price suggest that if a consumer is satisfied with a brand they use, it is challenging for a loss-averse consumer to be drawn to other competing brands. (Paraschiv & L'Haridon, 2008)

Harhut (2022) demonstrates practical ways to utilize loss aversion in marketing. For example, indicating how many items are left in stock or communicating to customers that a particular event might never be repeated again. It is also suggested to replace texts such as “get in on” with “do not miss this” to trigger loss aversion more efficiently. Another way is to highlight a deadline or an expiration date or to offer a free trial, if possible. When something is free, it can remove the fear of loss, but it also helps to create the endowment effect; since the consumer is later used to having the service, they might not want to lose it after the free trial. It is crucial to employ loss aversion responsibly and ethically, being respectful towards the consumers.

6.3 Scarcity Principle

Scarcity tactics have a significant role in marketing. Cues that signal the potential unavailability of a product generally tend to increase its desirability and value, increasing consumers' purchase intentions. Examples can include promotion campaigns with limited edition products and empty shelf space. (Barton et al., 2022) Limited quantities, times, opportunities, and limited availability can motivate customers and prospects to make those purchase decisions. Another good motivator in marketing is the feeling that some people have access to something that everyone else does not have access to, simply because of who they are or the group they belong to. (Harhut, 2022)

Cialdini (2021), a psychology professor and author of *Influence: The Psychology of Persuasion*, lists scarcity as one of his six principles of influencing. He mentions that often, opportunities seem more valuable to people when their availability is limited, and as those opportunities diminish, people lose their freedom. People usually hate to lose the freedom they already have. Humans do not only want the same item when it becomes scarce, but they want it the most when competing for it. (Cialdini, 2021; Harhut, 2022)

Scarcity tactics have been found to be very effective in their impact on consumer behavior. It is precisely because of these strong, motivational effects of scarcity that have led to their

longstanding use by marketing professionals for years (Barton et al., 2022). People are keen to access privileges, perks, and opportunities that others cannot get. The experience makes them feel exclusive. They might be more likely to take the action they want when they feel like they are a part of a selected group. (Harhut, 2022)

The study conducted by Barton et al. (2022) presents three kinds of scarcity cues: supply-based, time-based, and demand-based scarcity cues. Supply-based scarcity cues indicate the product's supply is limited through limited production or distribution channels. Time-based cues refer to the supply of a product or offer that is limited to a specific time frame, for example, "Black Friday" or "Happy Hour." Furthermore, demand-based cues could be, e.g., empty shelves, long queues, or other proofs that other customers are viewing these same items. Their study demonstrates that supply-based scarcity has the most significant impact on purchase intentions, and second is time-based scarcity. Demand-based scarcity has the slightest effect compared to others. More specifically, supply- and time-based scarcity cues were more effective regarding hedonic items, but demand-based scarcity cues had a better impact on utilitarian items. (Barton et al., 2022)

Harhut (2022) presents a case study of using exclusivity to increase class enrollments. A professional association was launching an education series allowing members to get an advanced certification. The challenge of the launch was that the subject matter was new to the industry, regarding a topic that the members needed to be convinced to be valuable enough. Another challenge was that the series was expected to be confused with an earlier education series offered regarding a similar topic. The email offers were sent to those who participated in the earlier education series using exclusivity. The emails used language that was encouraging their members to be among the first ones to sign up and achieve this new status. They were also explained that since they had their first certification, they were entitled to automatically level up to the next session for the advanced certification. Using urgency, the emails also stated that the class would be expected to be sold out, and when it did, it would not be available again until next year. The subsequent emails included the decreasing number of seats left. As a result, the advanced class was sold out in all the 14 locations it was held.

There are various ways to employ the scarcity principle through urgency and exclusivity. For instance, using words in marketing messages that suggest urgency, such as *'hurry'*, *'do not delay'*, *'last chance'*, etc. Another example is flagging items that are back in stock or expected to be sold out soon. Other examples are providing customers with VIP codes, early access, or special discounts or services. It can be helpful to use language that makes customers feel exclusive, such as *'reserved for you'*, *'you have unlocked'*, or even to create customer tiers with desirable labels, such as *'gold level'*, *'platinum level'*, etc. (Harhut,

2022) Figure 7 below demonstrates the click through rates of different email offers using scarcity principles.

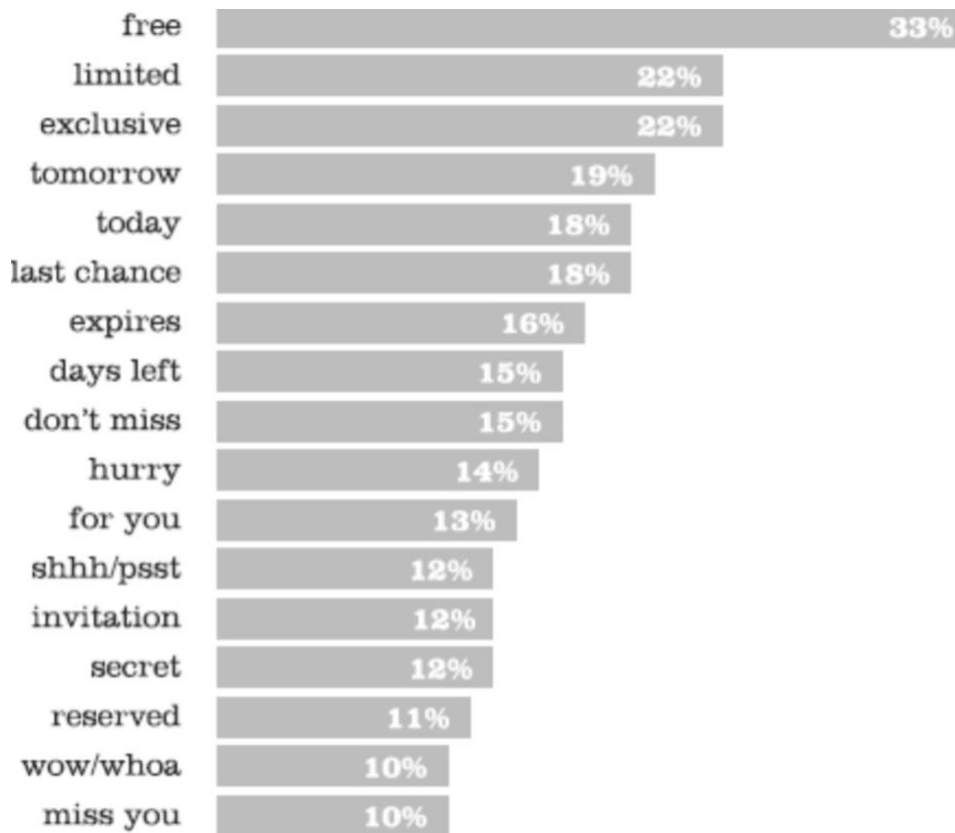


Figure 7: Click through rates for expiring offer emails using scarcity principle (Worldata, 2021)

6.4 Social Proof

Social proof is defined as a psychological phenomenon where people define the proper behavior for them by studying the behavior or reactions of others in a similar situation, therefore copying those same actions (Fong et al., 2020; Kim et al., 2023). Social proof can be seen as harnessing the power of people like us and the people we like. When a prospect is not quite sure about their decision, they might seek confirmation from other people like them and for what they have actioned. Studies have shown that this is a shortcut for decision-making that can save mental energy and make people feel more confident. From a marketing perspective, it is essential to show the prospects that many others have already done what they are asked to do. (Harhut, 2022)

According to Cialdini (2021), consumers often assume that *'if there are many people doing the same thing, they have to know something that we do not'*. Social proof is powerful, hardwired human behavior, that marketing professionals can utilize efficiently. This is also why celebrities' endorsements can be effective for the right audience. They might not be

professionals in the field they are endorsing, but the people who like them can find the endorsement highly positive, making a product seem more desirable. (Harhut, 2022)

In 2009, Duke University and Peking University researchers tested the Social Proof Theory by randomly placing one of two placards on the tables. The other half was named 'The top 5 most popular dishes of last week', and the second half simply listed five sample dishes that were not mentioned to be popular. The experiment later demonstrated that the top 5 dishes listed had increased their demand by approximately 13 to 20 percent. Meanwhile, those other five sample dishes did not see any increased demand. The experiment showed that when something is described as popular, it then becomes more popular. (Todd, 2009; Tunçgenç et al., 2021)

Another study examined the hypothesis that even small, social proof nudges can be effective when people do not have a clear preference beforehand, either due to being indifferent or due to experiencing a conflict between choices. The study utilized social proof nudges in steering the participants' choices. Results of the study demonstrated that those small social proof nudges (such as showing the choices of previous participants) were effective in steering the participants' decisions. However, it is crucial to remember that other factors, such as specific populations or settings, can be a part of the decision-making process. (Venema et al., 2020)

Social proof can be useful in relatable customer testimonials and reviews, providing lists of case studies or satisfied clients, or highlighting the number of followers, downloads, customers, etc. Copywriting can include descriptions such as *best-seller*, *popular choice*, *previously sold out*, etc. It is important to use caution when social proof is applied in marketing. For instance, indicating that many consumers still are doing what is not wanted for them to do can reinforce their current behavior and backfire from the marketing perspective. (Harhut, 2022)

6.5 Autonomy Bias

It is an innate desire for humans to be in control of themselves and their environment. Marketers can appeal to their customers better if they give them some sense of control, for instance, allowing them to co-create or make choices. The existence of choice indicates that a person has autonomy, and the existence of autonomy provides confidence, demonstrating that they are in control. When people have choices, they feel in control, fulfilling a deep-rooted human need for autonomy. (Russell, 2020) However, giving too much choice slows customers down and has adverse effects on responses (Harhut, 2022).

Regarding decision-making, researchers have observed that giving people more autonomy in even small everyday tasks can have an impact. For instance, the crossing signs in New York

City were switched to an automatic system that displays alternately 'walk' or 'do not walk' signals. Since removing all of the buttons at crosswalks was costly, they were left in place. Whenever people still pushed the buttons, they were much more likely to wait when crossing the street, even when pressing the buttons did not purely affect how quickly the walk signs changed. The fact that people had the impression that they had control of the situation influenced their behavior. (Harhut, 2022)

In another study, researchers observed that giving consumers more control of their exercise regimen had a direct effect on their satisfaction rate. When the customers were able to choose their own regimen, they were more satisfied with their program compared to those who did not have any say on the matter. People had different perceptions of their exercise program depending on the level of control in them. (Harhut, 2022) When a person has a choice, it means that they have autonomy, and the existence of autonomy gives people confidence that they feel in control. (Russell, 2020)

From a marketing perspective, it is more beneficial to provide more than one option, if possible. Offering even just two or three different options can prompt people to choose between them instead of deciding whether they want the product at all. It is better to trigger the autonomy bias by providing a chance to choose since if the customer or prospect is given only one product or one service level, they have nothing to compare it to, and therefore, they have no context in which to evaluate that one option. Hence, people might often delay their decisions, thinking they will do more research on the matter or will think it over later, and therefore, the decision to buy will be delayed or might never even happen. When switching from one option to two or three, the customer's mindset can change from "Do I want this or not?" to "Which one of these options would I want?". The option to not buy at all still fully remains, but it could drop out of the options when the mental energy is now focused on comparing the options they have been offered. (Harhut, 2022)

Research at Tulane University studied the single option aversion by conducting an experiment focused on a DVD player in 2013. In some cases, participants were introduced to a Sony product, and in other cases, to a Sony and a Philips product. When the participants only had the Sony product as their only option, just 9 percent of the participants claimed they would buy the product. Whereas the participants who presented two options, 32 percent of the participants claimed that they would buy the Sony product, that is almost quadrupling the purchase intent. (Mochon, 2013)

In a similar way, reminding people they have a chance to choose can also prompt them to make that decision they desire to make. Dooley (2012) suggests that once you have delivered the marketing argument with a strong call to action, you can end the message reminding customers that in the end, they are the ones with control, using wording such as '*the choice*

is yours' or *'it is up to you*'. In a case study presented by Harhut (2022), using a sentence such as *'you're facing an important decision, and if you don't act quickly, someone else will decide for you*', turned out to be highly effective, triggering autonomy and urgency at once. (Harhut, 2022)

While it is good to have a few options, too many of them could backfire for marketers. When there are too many options to choose from, customers might get overwhelmed since it makes it harder to choose from all of the numerous choices, or customers could even get buyer's remorse, wondering if there was even a better choice. Therefore, it is key to provide enough options in order to prompt a decision, but not too many that could overwhelm any potential customers. (Harhut, 2022; Dooley, 2012)

According to Harhut (2022), there are a few tactics and ways to trigger autonomy bias. For instance, using empowering language such as *'take control,*' *'regain control,*' or inviting customers to choose what they want, it could either be a free gift, a level of service, or something entirely else. If possible, customers can customize some aspects of their purchase, either a regimen or design, to feel like they have more autonomy in the situation. As previously mentioned, it is better to offer two or three options instead of one, and it is crucial to present those options clearly and easily distinguishable. If the choices cannot be easily differentiated, it can lead to the prospect not deciding at all.

6.6 Storytelling

Neuromarketing and behavioral sciences highlight the power of storytelling in marketing (Hamelin et al., 2020; Hunter, 2016). Studies have shown that people remember and even understand information better, when it has been delivered as a story. The human brain is wired to respond to narratives that evoke emotions and create lasting memories. By utilizing storytelling techniques, businesses can create compelling brand narratives that resonate with consumers on a deeper level. Storytelling can help in creating emotional connections and influencing consumer perceptions and preferences. By understanding the behavioral responses associated with storytelling, marketers can design campaigns that leave a lasting impact on their target audience. (Dooley, 2012; Harhut, 2022)

Persuasive storytelling is an important tool for businesses (Hamelin et al., 2020). In a study conducted by Hong et al. (2018), they used a fictitious start-up brand to test the effectiveness of two audio advertisements. One was built around a story, and the other was purely informative. As such, the findings indicated that participants who were listening to the audio story gave more favorable feedback compared to the other control group who listened to just the informative part.

A similar effect was found in Hamelin et al.'s (2020) study, where participants read two different stories regarding the same subject. Two groups of participants were asked to read two short, fictitious texts about the positive activities of the selected company towards the environment. One story was written using specific words to evoke positive emotions, while the other was written using more of a cognitive approach. Biometric data, eye tracking, facial expression analysis, and galvanic skin responses were recorded while the participants read the texts. The study showed that while the affective story changed respondents' attitudes faster and more effectively, the cognitive approach led to a longer-lasting attitude change. Therefore, affective stories might lead to more immediate attitude changes, but cognitive stories lead to deeper processing and, later, better retention. In addition, both stories increased significantly factors of trust and the participants' liking towards the selected company. (Hamelin et al., 2020)

A story engages the brain in a different way compared to simply feeding people with facts and figures. Scientists have shown that when we process language, mainly the areas that are associated with speech and language in the brain are engaged. But when a person hears a story, it activates even more various parts of the brain. For instance, if a story includes smells, it activates the olfactory cortex in the brain. And if the story includes motion, the brain's motor cortex is activated. This is important because the more there are activated areas in the brain, the better we understand and remember those stories. Research shows that well-designed stories can be the most effective in exerting influence. Therefore, stories are not only for brand building; they can be used to prompt action as well. (Harhut, 2022)

Research has shown that when a person is listening to someone telling a story, their brains become almost synchronous. The neurons in the listener's brain are firing in a similar way as the neurons in the storyteller's brain. The activity of these mirror neurons (as introduced in 6.1) is also called neural coupling. A second after a specific brain activity was observed in the speaker's brain, this same pattern was then repeated in the listener's brain. However, brain scans have shown that neural coupling does not occur necessarily always, only when the listener is really paying attention and is understanding the story. (Dooley, 2012; Stephens et al., 2012)

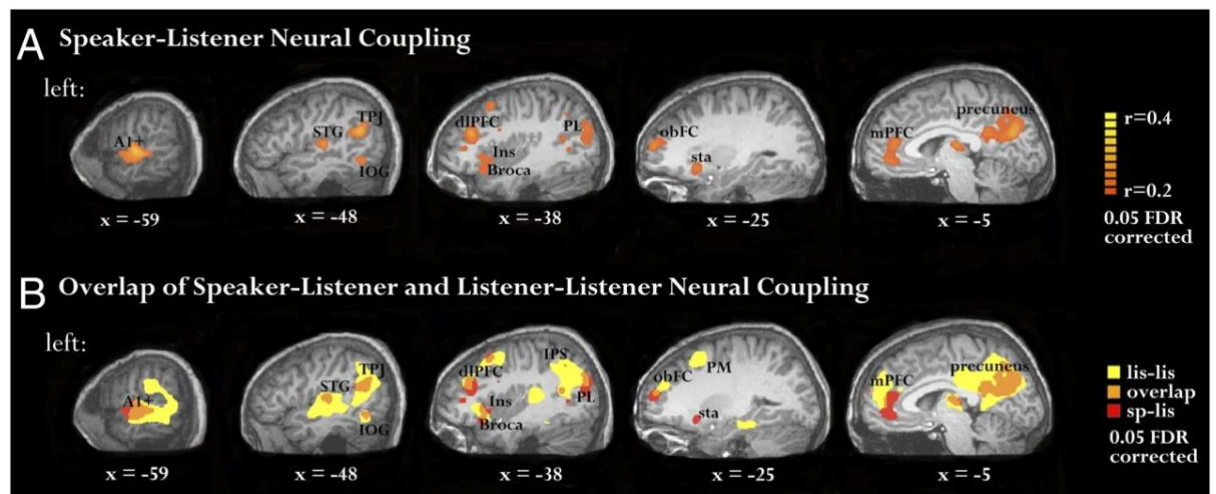


Figure 8: The speaker-listener neural coupling in the brain (Stephens et al., 2012)

In addition, stories have a way of creating empathy and emotional connection. When people get more involved in a story, they are going through a process called narrative transportation. They are experiencing what the characters are also feeling, whether it be stress, anger, frustration, or any other emotion people might feel when they encounter an issue that our product could solve. They can also feel relief, delight, happiness, or some other emotions that can appear with solving that issue using our product. As emotions drive decisions, and marketers are seeking those decisions, creating communications that can prompt people into experiencing emotion is crucial. (Harhut, 2022)

As consumers are engaged in the emotions of our story, their brains start to respond by releasing hormones such as dopamine, cortisol, and oxytocin. Dopamine, being linked to the brain's reward system, fuels the seeking of reward (that being the product we are marketing and what it can allow consumers to accomplish). Cortisol makes people more attentive and being more alert (to our message), and oxytocin engenders trust, encouraging customers to trust us better and to be more likely to buy from us. (Harhut, 2022)

To deliver a good story, marketers need to go beyond facts, features, and benefits by painting a mental picture for consumers, involving their emotions, and making them care. In order to do that, a story needs to start strong, making sure that we have the attention of the audience. The subject needs to be interesting and compelling. It is not supposed to be about what we are selling; it is about what the product could do for the person if they buy it. Good stories are also relatable and make connections, and people trust relatable stories. Marketers can structure the story to follow the dramatic arc, which is exposition, rising action, climax, falling action, and resolution. A story can emerge in various formats, either in writing in an email, social media post, on the website, video, printed advertisement, etc.

(Harhut, 2022) It is good to remember that since the reptilian brain remembers the beginning and end the best, it is also an excellent reason to focus on those parts of the story (Renvoisé & Morin, 2007).

7 Development Work

The development part of this thesis consists of various insights from the literature review, presenting different examples of how to use insights gathered from the topics, including understanding the reptilian brain in decision-making, mirror neurons, scarcity principle, loss aversion, autonomy bias, social proof, and storytelling. In this development phase, the author of the thesis has created a few prototypes for social media posts, website, and copywriting tactics, using the insights gathered from the literature and carefully combining them with Company X's brand colors and aesthetics in order to fit the case company's brand visually. The photos chosen for the prototypes are entirely copyright-free and available to be used freely by the case company. However, the development work includes activities and possibilities of a wider application of the results, making the contents feasible with very minor modifications for all kinds of businesses.

7.1 Understanding the Brain's Decision-Making Processes

Since the reptilian brain is linked to decision-making, and the stimuli are universal, the insights and understanding of the brain's decision-making processes and stimuli can be utilized in various ways in our marketing strategies.

The reptilian brain is self-centered and likes tangible input - marketing messages need to be focused on the customers' well-being. In the life coaching context, it is important to emphasize the importance of the benefits that the customer can receive with life coaching. This is naturally very understandable. However, the benefits need to be precise, real, and tangible, where prospects can really imagine themselves benefitting from the service. It is key to demonstrate the gains by being tangible and providing hard evidence. (Renvoisé & Morin, 2007) In a life coaching context, it could be, for instance, highlighting and telling stories of what happened when other customers have been able to find and actualize their true strengths and goals and where it has possibly led them or could lead them.

The hard evidence can be a financial, personal, or even strategic gain. Customer testimonials are proof of the service working and demonstrating what the tangible benefits are for the customer. It is even better when the testimonial can highlight the exact areas of their life that have been improved. It also enforces the law of social reinforcement (Cialdini, 2021), which stipulates that when we become aware that others have accepted this solution, our natural responses accept them more easily since it has social proof.

Another way to show proof is by giving a demo - a short demonstration of the product, proving the gain without going through all of its features. For life coaching services, it could be to offer the first session for free (possibly a shorter session than normal for profitability reasons) and go through the goals of the prospect, then provide a personalized plan that would include X number of sessions. Other options could be giving a free webinar to demonstrate the benefits, etc. (Renvoisé & Morin, 2007). The goal is to leave the prospect thinking that they do not want to miss out on this opportunity.

The reptilian brain remembers the beginning and end. This is due to survival reasons, being in its best interest to be most alert at the beginning and end of situations or interactions to ensure that no unknown factors are causing danger. Once it gets comfortable, it goes into energy-saving mode, paying less attention to its surroundings. This is important to understand when we want to grab our prospects' attention. The reptilian brain is very quick to judge, hence why it is crucial to use strong grabbers to get a hold of their attention. (Renvoisé & Morin, 2007)

There are various ways marketers have used grabbers in advertising, such as mini-dramas, clever wordplays, props, rhetorical questions, humor, or sharing stories. Rhetorical questions, such as the “*What if you...?*” type of questions, can be useful to draw the listener or reader into internal dialogue, thinking about the positive aspects that could happen if they had access to our services (Renvoisé & Morin, 2007). For instance, in the life coaching context, the questions could be “*What if you could take control of your life today?*” or “*What if you could stop procrastinating and living your dream life today?*” Using “*what if you*” questions, we appeal to the self-centered reptilian brain, and we enable people to visualize how the benefits could affect their lives.

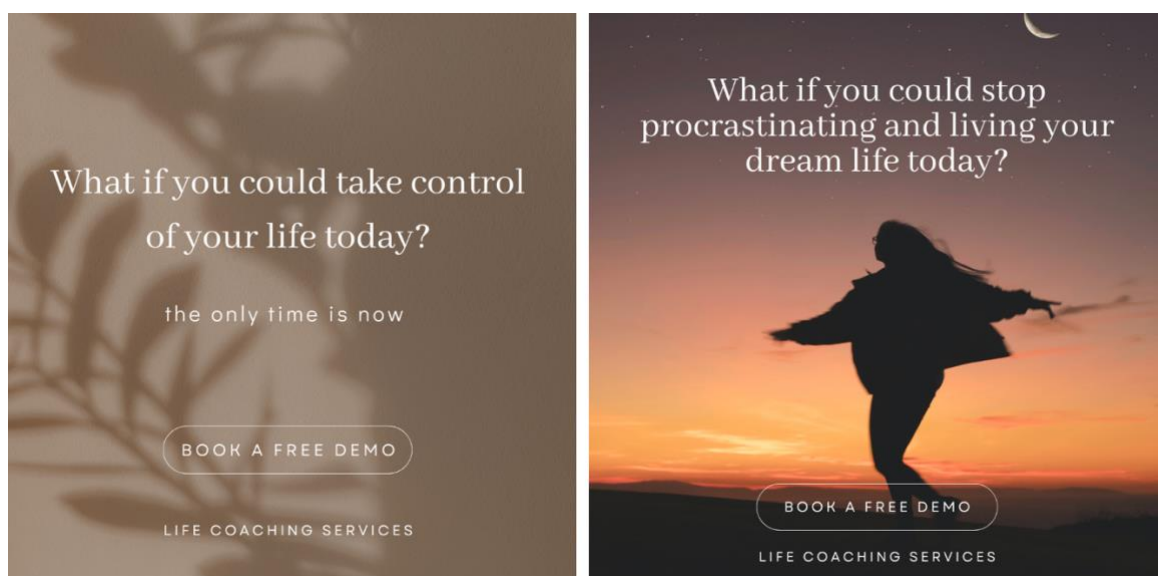


Figure 9: Prototype 1 - ads/social media posts using a rhetorical question

Since the reptilian brain remembers the beginning and end, we also need a strong close. Marketers typically use a call to action at the end of their marketing messages. The marketing message should have a goal in mind: what do we want to achieve with this message, and how? The call to action is asking for prospects to book a free demo, review the selection of products, or sign up for a monthly newsletter. (Renvoisé & Morin, 2007) It is important for marketers to guide the prospects in the direction they want them to go, and they often use a call to action in the end in order to do so.



Figure 10: Prototype 2 - an attention-grabbing start ending with a CTA

The reptilian brain makes decisions based on visual input. Visuals help people to visualize the benefits that our solution can provide. They are graphical representations of how our service can influence their life. A contrasted visual can be even more effective if it shows prospects how their lives would look before/after our solution or without/with the solution. In contrast, it is important to show the prospects' pain first, then the relief that they would then gain from our solution (Renvoisé & Morin, 2007). Naturally, utilizing eye-catching visuals and design elements in marketing materials can capture the attention of prospective customers and draw them toward the key message or call to action.

As a life coach, using visual input to inspire customers and prospects helps them to visualize themselves, how their ideal life would look like, and what they want to achieve in their future. The life coach business can use mood boards or 'dream boards' to help the customers make their dreams and goals more concrete and achievable when they use their time and effort to consider what their dream life looks like. Therefore, as an example, using a picture of a mood board can help motivate and inspire new clients to try out the services. The

prototype below could be used to visualize the dream board with a question and then explain the benefits of creating the dream map in the post's caption in detail.



Figure 11: Prototype 3 - two versions of a social media post visualizing the dream life

The reptilian brain is wired to pay attention to contrast, and studies have demonstrated that humans are constantly proactively scanning for possible changes in our environment. Contrast works as a shortcut to attention and a fuel to processing. Contrast works since the reptilian brain understands it without any effort. A simple before/after photo cuts right to the heart of the reptilian brain and enables us to instantly understand the proof of gain for the promoted product. (Renvoisé & Morin, 2007)

There are various ways of using contrast in marketing visuals other than before and after photos. A prototype below shows an example of how contrast can be used to demonstrate how life coach services can bring more clarity to one's life. Using a photo of a magnifying glass provides—more clarity. This simple way of demonstrating the benefits of having a life coach can attract the attention of the viewer with ease, and the reptilian brain understands the message effortlessly.



Figure 12: Prototype 4 - using contrast (blurry/clear) to deliver a message

The reptilian brain is triggered by emotion - we remember events far better whenever we have experienced them with strong emotions. A strong emotion accelerates and strengthens the synaptic connections between neurons. A strong emotion also creates a cocktail of hormones in the brain, which then acts as a memory-maker, triggering a decision. (Renvoisé & Morin, 2007) The stronger the emotions, the more vivid and long-lasting the memories; this is also applicable to learning as well (Dozier, 1998). Therefore, marketers aim to create strong emotions that motivate people to make a purchase. Life coach businesses can create marketing messages that tap into emotions such as self-improvement, personal growth, and empowerment, highlighting the emotional benefits of their services.

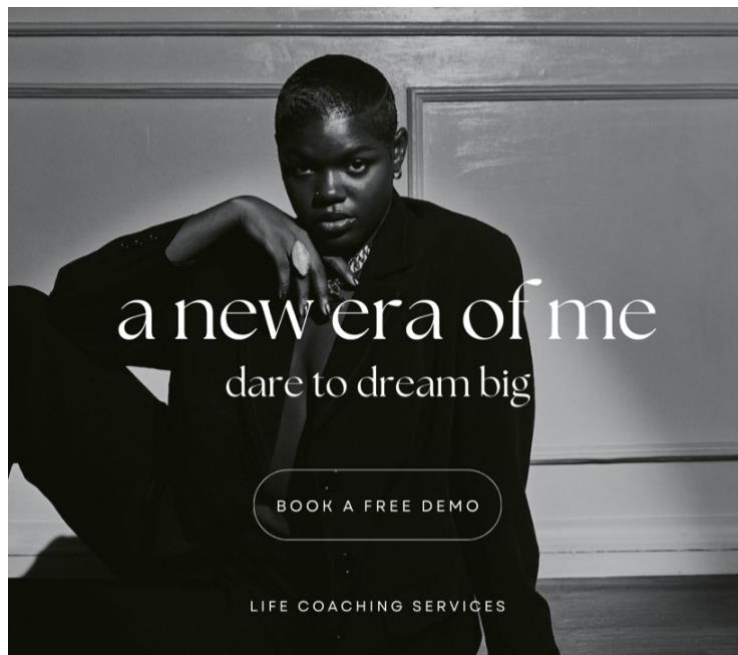


Figure 13: Prototype 5 - using emotion to prompt action

The good thing about these stimuli is that they are universal. Acknowledging and adopting them can give us better positioning in marketing and improve our ability to communicate, market, and sell our products and services.

7.2 Mirror Neurons in Marketing

Mirror neurons can override people's rational thinking, causing them to imitate unconsciously those in front of them. This concept of imitation is highly important to understand when it comes to consumer behavior. The mirror neuron system and its subtlety, complexity, and pervasiveness offer great applications for marketers, but it also highlights the importance of constructing effective and motivating marketing messages. (Weber, 2007)

When introducing a new service or product, the key to making it tangible to the target audience that has not yet interacted with the product is to make it relatable for them in a way they have done it before. Instead of introducing a product or service as an entirely innovative product, by introducing the similarities between this approach and the traditional way, consumers can then reach into their repertoire and their bank of performable and innate responses and preferences to understand the product better, in a way they are familiar with (Weber, 2007). If the product represents a new way of behaving, the ability to fall back on some form of previous behavior allows consumers to be more willing to try out this new approach since it is only a variation of imitated actions they have already performed. (Crimmins & Callahan, 2003).

When it comes to mirror neurons and marketing via video content, businesses can use mirror neurons to build connections with their target audience through camera placements and how they interact with the camera. Mirror neurons also help to create a virtual proximity to the target audience. Even using videos, our unconscious brain responds to what we see as if we would see it with our own eyes, making it feel as if the people in the video would be in close proximity to us. Moreover, when we are in close proximity to the people that we trust, it can help to develop personal connections. Businesses can cultivate closeness by bringing their audience to a social distance that is fewer than 3.5 meters or a personal distance that is fewer than 1 meter, which can help in creating strong emotional connections with the audience. (Scott & Scott, 2020)

Virtual proximity can be created by:

- Cropping the video in order for the presenter to appear to be in the viewer's personal space, placing the camera less than 1 meter away from the presenter.
- The presenter looks into the camera as much as possible, creating the illusion of looking the viewer in the eyes.
- Creating a friendly and open atmosphere, speaking to the camera as if it would be a close friend.
- Having an interesting background while presenting helps to engage the viewer.
- Another person filming the presenter with a handheld camera, creating a natural angle that comes with the person's height and movement, creating a better in-person experience.

It is beneficial to consider the importance of mirror neurons when it comes to planning video content and video strategy (Scott & Scott, 2020), providing the possibility to develop better connections to the target audience and more loyal customers.

In addition, the mirror neuron network is important since it also supports the concept that motivation and attention are central aspects of vicarious learning, and creative promotional strategies can create a learning effect. Hence, the creative side of the promotion must capture the attention of the consumer and motivate them to process the given information. (Weber, 2007)

7.3 Loss Aversion & Scarcity Principle With Urgency and Exclusivity

People are roughly twice as motivated to avoid the pain of loss as they are to achieve the joy of gain (Kahneman, 2011). As the deadline nears, consumers' perceived gains from a promotional offer turn into a perceived loss, as they may lose the opportunity to take advantage of the offer. Buyn & Sternquist (2012) demonstrated in their study that both perceived perishability and scarcity significantly increase expected loss from not purchasing,

indicating that the more customers are aware of limited availability, the greater the psychological losses are from inaction.

One way of utilizing loss aversion and scarcity, for instance, is indicating how many items are left in the stock or how many seats are available in a seminar. When there are only a few seats available, marketers might warn prospective clients that a product is going to be sold out soon. Marketers could also warn customers that a certain event will not be repeated or is not available again until next year or inform the prospect that the offer may not be sent to them again. (Harhut, 2022)

Another way is allowing people to keep their options, informing them that they have the option to decide now but cancel later. This way, customers can postpone the decision since they do not need to make a final yes or no decision just yet, indicating that they have not lost anything, at least for the moment. Usually, when people make a commitment, they tend not to change their minds and go back. (Harhut, 2022) In addition, offering a free trial is also an option to use scarcity since when something is presented to be free of charge, it can remove the fear of loss.

Instead of using words such as *'take advantage of'* or *'get in on'* in marketing messages, it is recommended to replace them with wordings such as *'do not miss.'* This helps to trigger loss aversion better. It is also important to highlight certain deadlines and expiration dates; it is expected to see an increase in response closer to them, when people are rushing to make sure they will not be missing out. (Harhut, 2022)

People like to feel special, and they tend to want what they cannot have; therefore, products that are scarce, are often seen as more valuable. Urgency and exclusivity can be useful tactics for marketing, and they can be used separately or together in marketing messages. Exclusivity can be demonstrated by using VIP codes, exclusive access, membership tiers such as *'gold'* or *'platinum'* memberships, or personalized messaging. In copy, it is beneficial to use wordings such as *'secret'*, *'you have been selected'*, *'just for'*, etc. When adding scarcity with exclusivity, it prompts people to respond faster. (Harhut, 2022)

Offering customers early access, special previews, or inside details is another way of making them feel special. Special discounts or free gifts for certain members are also a common tactic for marketers. In order to highlight why the product is better than competitors, phrases such as *'not typically available'* or *'unlike other life coaches...'* can be helpful. A customer could be made feel special by pointing out that they have been selected for a particular membership or that they have been pre-approved, but at the same time also reminding them that there are only a certain number of people who can achieve this same privilege. (Harhut, 2022)

Ways to use scarcity and exclusivity in copywriting for life coaching services:

- *New limited-edition course expected to sell out this week*
- *Book now to be one of the first to experience this advanced level of luxury*
- *Members only - offer expires in 24 hours*
- *Gain early access with your VIP code today only*
- *Don't miss this - platinum members only*

It is crucial to use loss aversion and scarcity in ethical and responsible ways, providing customers and prospects the respect that they deserve.

7.4 Autonomy Bias in Action

Marketers who wish to trigger autonomy bias can do so by providing their prospects and customers with a choice. Options can prompt people to spend more. For example, people pay more to choose their own seats on a plane or for the option to cancel a hotel reservation. People pay more to stream music without advertisements so that the ads will not interrupt or disturb what they are listening to. (Harhut, 2022)

Providing a few options for customers gives them the opportunity to compare and evaluate which would suit them best, providing them with autonomy. This way enables us to offer different pricing options or packages to cater to a broader range of clients, providing flexibility while still ensuring the value and expertise of the coaching services. The provided options need to be represented clearly and easily to understand right away. For life coaching services, the options and a visual representation idea are presented below:

1. 1:1 coaching session package
2. Online course package (this marked as the most popular option to trigger social proof at the same time)
3. VIP package - including the 1:1 coaching sessions + online course + freebie

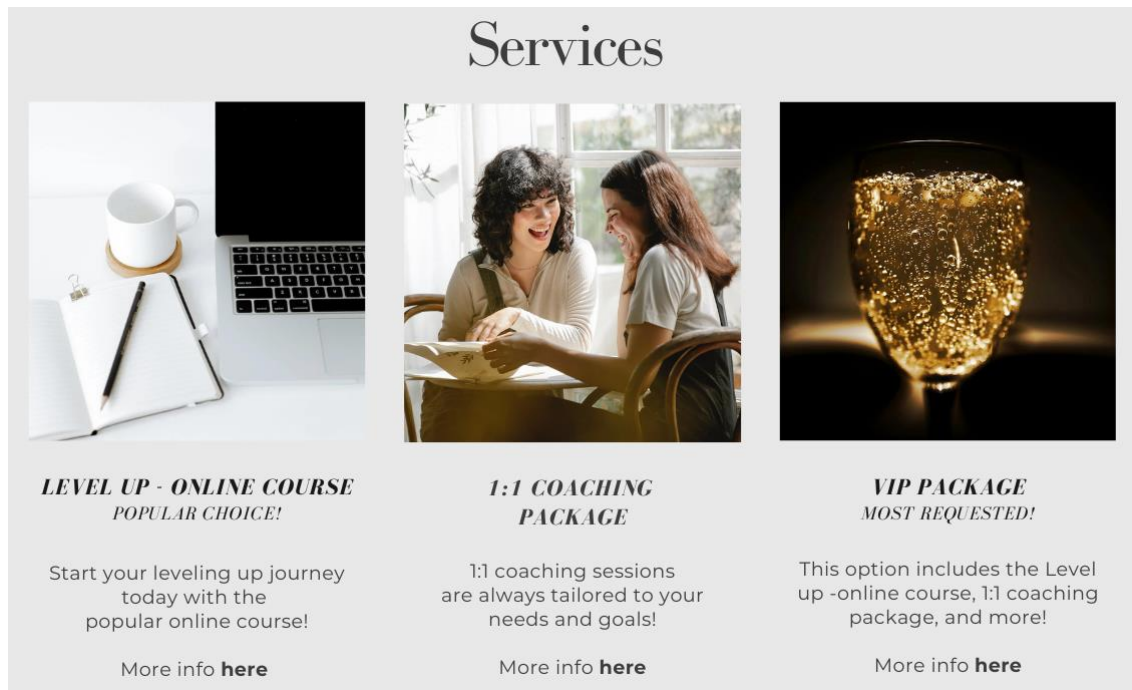


Figure 14: Prototype 6 - service options for the website (mockup)

Another way for marketers to utilize autonomy bias is to use empowering language, such as ‘*regain control,*’ or to highlight that the choice is truly theirs, with a phrase such as ‘*you have an important decision to make, and if you’re not quick, someone else will determine for you*’ to promote a life coaching service or a seminar for a person who is possibly feeling stagnant in their current life situation. By informing people that they are about to lose the option to decide for themselves it is a powerful way of triggering autonomy bias. In addition, another way to tap into autonomy bias is to invite customers to choose what they would want. For instance, it could be a type of reward or a level of service, or when asking the customer for an action, add a reminder that they are free to do what they want. (Harhut, 2022)

7.5 Social Proof as a Marketer’s Tool

Social proof can be effective when prospects are comparing themselves to other people who have been in a similar situation or to people they like and admire. When people are unsure of their decisions, they prefer feeling confident rather than special and will be more likely to follow the lead of others. It helps to reassure people that they are making the right decision. Marketers can trigger social proof by demonstrating that countless people are already doing something, and when there is a large number of people, it gives an impression to the person that those others know something that they do not know. In addition to that, people have a similar impression of people whom they admire and like. Therefore, celebrities and influencers can also be useful, and that is why big brands have famous movie stars as their brand ambassadors.

There are multiple ways to use social proof in marketing:

- Providing the audience with a list of satisfied customers and case studies.
- Emphasizing the number of customers, followers, views, years in the profession, etc.
- Using descriptive words such as *'popular choice'*, *'bestselling'*, *'the most requested'*, *'expected to sell out'*, or *'back in stock'*.
- Using language such as *'people like you'*, or *'most people'*.
- Keeping in mind that a person is more likely to choose a product with an average star rating of 4.5 compared to a product with a 5-star rating since 4.5 stars is simply more believable.
- If possible, cooperating with social media influencers as brand ambassadors or providing customer testimonials.
- Presenting to the audience that customers just like them have also chosen certain products.
- Choosing reassuring words such as *'usually'*, *'often'*, *'generally'*, or *'typically'*.
- Encouraging current and previous customers to give referrals.
- Presenting testimonials by customers who are similar to the target audience. For a testimonial to be as effective as possible, it is good if the customer admits some earlier hesitation before they reveal that the product ended up being a great decision. Requesting customers to leave their testimonials and to be as precise as possible helps to create a tangible vision for the reader.

For example, the difference between a credible and effective testimonial compared to a vague one:

Vague testimonial: *'The VIP package was good.'*

Detailed testimonial: *'At first, I was not sure if life coaching would be beneficial for me, but the VIP package turned out to be amazing! I finally stopped procrastinating and I feel more confident that I'm going in the right direction in my life.'*

Naturally, it can feel uncomfortable or difficult to ask customers to write more detailed testimonials like the example, hence why it is important to ask customers for reviews and feedback from customers with details in order to be able to use those gem-like testimonials in marketing.

7.6 Storytelling as a Part of Marketing Communications

For marketers to be able to tell a great story to their audience, it is important to move beyond facts, data, features, and benefits. Instead, the aim is to paint a mental picture to

the target audience and to involve their emotions and make them care. There are various ways of achieving that, such as:

- Start strong - aim to grab the attention right away; as presented earlier, the reptilian brain remembers beginning and ending the best.
- Aim to choose a topic that the audience will find interesting and compelling, which is not what we are selling; it is more about what the product is able to do for the person purchasing it.
- Tell the story in an active voice as opposed to a passive one.
- Good stories create connections and are relatable; people trust stories that they can relate to.
- Utilize the classic dramatic arc in stories, include the story with a rising action, climax, falling action, and finish with a resolution.
- Choose powerful verbs and certain nouns in order for the audience to envision the action.

The stories can be presented in various formats, whether they would be written in social media, email, website, advertisement, or in a video form. All stories share a common basic structure despite the variety of superficial differences between them. Stories often include something that we want, and firstly, we need to overcome obstacles in order to achieve it. The story continues from complications to crises and finally to a resolution. Every story, big or small, in its own way, presents a hero facing some kind of struggle to overcome them (Ash, 2021). Harhut (2022) presents proven tactics for marketing professionals to use in their storytelling:

1. Especially when it comes to difficult or delicate topics, it is good to use a story to introduce and process the topic. Depending on the delicacy of the subject, it can be presented with a touch of humor to make the story even more entertaining and memorable.
2. Telling a story of how the business came to life. For instance, there is a big difference between a brand simply listing their core values on their website compared to a brand telling a story of where all their core values started from and then fueled the business to come into existence.
3. Brands also utilize stories to promote their social responsibilities. For instance, some brands tell a story of how a certain percentage of their profit goes to a certain charity and why. Hearing those stories are likely to sway some customers to choose those brands over others.
4. Stories about using a product can be very effective, whether we are introducing a new service or product, featuring various ways to use a product, or showing a customer telling their story of using a product.

5. Customer as hero -stories, such as accounts of how a previous customer succeeded in achieving their goals with the help of life coaching or managed to overcome a long-standing challenge that has been affecting their life negatively for a long time. Telling stories like these is far more impactful and memorable than simply listing examples of how life coaching can improve the quality of life.
6. When the business is in a competitive marketplace, storytelling can help us share our differentiator story. Finding that one story that we can discuss that sets us apart from others, even if it is only ancillary to what we are offering. For example, for life coaching services, it could be a freebie such as an eBook or a private Facebook group for clients who have purchased the VIP package, etc.
7. Stories that define a company's standard - this could be, for example, sharing a story about how a customer came to the life coach with a certain singular challenge in mind, but after a comprehensive initial discussion, they were able to connect their problem to another challenge. This enabled the customer and life coach to go even deeper in the coaching sessions and, ultimately, provide even more value to the customer than they expected.

Stories can be entertaining and engaging since the human brain processes stories differently compared to plain data and statistics. When hearing/reading a story, more parts of the brain get activated. Therefore, people can understand the information even better and also remember it much longer. Stories are an efficient way to allow people to come to their own conclusions. People might disagree and argue with what others have told them, but they rarely argue with themselves. This is also why storytelling is a smart strategy when coming across skeptical prospects that we want to win over. (Harhut, 2022)

Stories can affect people's beliefs and behaviors, which is why they can be useful for building brands and motivating responses. Storytelling is the only way to activate parts of the brain in a way that a listener can turn the story into their own experience. (Stephens et al., 2010) Effective stories grab attention, are captivating and relatable, incorporate specific details and strong action words, and frequently follow the structure of a dramatic arc. We can share a variety of stories, such as the founder story, the birth of a product story, a customer as a hero story, our unique differentiator story, and accounts of exceptional customer service. (Harhut, 2022; Palmer, 2021)

Since life coaching is often a person-to-person service, the personal brand and image need to align with the stories shared with the audience. It is good to use recurring themes to keep the image consistent. Developing a strong personal brand that aligns with the coaching philosophy and values, allowing the audience to connect with our stories and establish trust and credibility.

8 Conclusions and Reflection

It is beneficial for any business to deepen its understanding of consumer behavior and insights from neuromarketing and behavioral sciences can bring new aspects and ideas into marketing practices that standard marketing studies could not bring along. Marketing strategies can be challenging and complex to plan, especially for small businesses that need to use their resources to grow as efficiently as possible.

Since people do not always know how they make their purchase decisions, neuromarketing, and behavioral sciences provide a deeper understanding of consumer behavior, and neuromarketing studies can complement information gathered from traditional marketing studies.

Humans operate with the reptilian brain in the driver's seat of our decision-making processes, which is why addressing the reptilian brain with our marketing messages is key. The reptilian brain is governed by fear, and the aim for marketers is to help customers overcome those fears in order to buy. The reptilian brain responds to visual stimulus and contrast, and it is highly selfish, being only interested in its well-being. It does not process complex words well; instead, it likes familiarity and simple ideas to provide tangible input. It is also triggered by emotion and remembers the beginning and end better than the middle parts.

Mirror neurons are the basis of the brain for learning by imitation. Because of mirror neurons, if we keep seeing a similar product repeatedly, it can impact how we feel about it with time, and it can make us interested in a product that was not initially appealing at first sight. Mirror neurons can also help to build connections with their target audience through camera placements and interactions with the camera. When we are in close proximity to the people that we trust (in videos or physically), it can help to develop personal connections. This can help in creating strong emotional connections with the audience.

Copywriting and other marketing messages can utilize insights from behavioral sciences, such as loss aversion, scarcity, autonomy bias, social proof, and storytelling. All these aspects can be useful in various marketing platforms, such as social media posts, advertisements, videos, copywriting on the website, or newsletters.

The development work drew findings from the literature review, aiming to provide a deeper understanding of consumers' decision-making processes and to build a brief guide with ideas, recommendations, and prototypes tailored for the case company. The goal for the ideas of the development work is to help kickstart the ideation process for Company X's marketing strategies using tactics derived from neuromarketing.

Given adequate resources and a more strategic allocation of time, a comparable effort could have given a more thorough examination and a richer set of findings. Furthermore, relying solely on one researcher for any interpretation of information introduces the potential for bias. In the context of this developmental work, the researcher's individual preconceived notions and preferences could have influenced the interpretation of the information. The quality of the prototypes is also open to interpretation depending on the individual and their aesthetic preferences, and the expertise of the author's graphic design was limited compared to a professional graphic designer.

However, the research and findings of the thesis show that the insights drawn from neuromarketing studies and behavioral sciences can provide helpful information to complement traditional marketing studies research. They provide additional information that could not normally be found with traditional practices, revealing aspects of consumer behavior that even consumers themselves could not know. This helps us understand in more depth what our customers want but need help telling us, giving small businesses like Company X better tools to improve their marketing efforts efficiently.

The last meeting with the case company included presenting the thesis and its results for feedback. The thesis was able to provide lot of new information, and the results were found extremely useful for the workplace. The case company was also eager to test the prototypes in the future independently. What was especially highlighted from the results, was that it helped immensely to understand consumer behavior better, why certain marketing activities and messages are useful, and also helping to eliminate unnecessary parts of the marketing plan. The results also helped to inspire and bring new ideas into marketing activities, and for the product offering.

Due to the limited resources for Company X and tight time restrictions of both parties, the testing of the prototypes was not able to be included in this thesis, leaving the testing as the next step to the Company X. What is also useful about the results is that they are versatile and not limited to only the advertising prototypes. The results include numerous useful ideas that can be implemented directly, or with minor changes, giving unlimited ideas and possibilities for the case company's marketing strategies in the future.

Furthermore, the results of the thesis are possible to implement as they are for other similar companies, including the prototypes for advertisements and copywriting styles. With small modifications, the same results can also be implemented for a wider application and for other businesses and industries to match different fields and product offerings.

8.1 Areas for Further Development

The topic of behavioral sciences and neuromarketing offers an extensive amount of research and development. Due to the limitations of time and resources, the topics had to be narrowed down. The author of the thesis faced challenges with choosing and narrowing down the key topics for the literature and research. Even though neuromarketing is still quite a new field of study, there was a wide range of material related to the topic that required narrowing down the topics based on what theories and findings have been used in marketing practices and how those same findings can be useful for the case company.

Further development could be useful in testing the ideas and prototypes of the development work in practice and measuring the results, such as visibility, engagement, followers, and new customers. Due to limited resources, this part of the research had to be excluded from the thesis, but could provide valuable information for future development.

8.2 Ethical Implications

Using behavioral sciences and neuroscience techniques in marketing can create a better understanding of consumers' decision-making. However, it arouses discussion of its ethical aspects from consumers' perspective. Criticism regarding neuromarketing has often pointed to its possible unethical research practices and manipulation of consumers. The criticism refers to possible risks regarding autonomy and violation of rights, including direct effects on consumers.

Most fears around neuromarketing can be similarly addressed to traditional marketing practices. Naturally, shaping consumers' choices is the aim of marketing in general, but it is feared that neuromarketing could offer businesses the ability to find a "buy button" in the brain. However, neuromarketing tactics cannot provide a specific way to optimize marketing messages, which could make people unable to control their decisions. As consumers, we are not always aware of all the factors influencing us, but we still make free choices.

A realistic issue regarding any form of marketing is adding consumerism. However, this thesis only aims to use the insights and findings to improve the marketing strategies of a life coaching business, which itself focuses on helping individuals with non-material services. Naturally, the target group for the case company is individuals interested in self-development and growth who are interested in life coaching types of services.

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