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NEUROMARKETING TECHNIQUES AS A STRATEGIC HORIZON FOR RESEARCH AND SALES MAXIMIZATION

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Introduction

The following essay explores the innovative stage of market-research industry and its multi-disciplinary nature, a key element to obtain increasingly high-quality data. The global market is dotted with organizations: the emergence of fierce competitors is stimulating new investments in every function of a company, and only management who strongly believe in the profitability of new technologies will survive. Hiring Neuromarketing experts can be a powerful weapon for gaining remarkable competitive advantages.

The first chapter introduces the reader to the topic and describes the characteristics that differentiate the today's potential customer from that of yesterday, focusing on the new touch points through which organizations should try to persuade. Furthermore, the same section explains the most important tools used by experts in market research, which may vary depending on the type of data to be obtained and the target channel.

The second chapter begins to highlight how Neuromarketing has become useful in improving the attractiveness of websites. It also provides the reader with some important tools adopted by successful platforms such as Airbnb. In this sense, wide room of discussion has been left for all those communication strategies that have decided to focus on the unawareness of Internet users in order to maximize conversions and build the loyalty of those who have already benefited from the service. If so, the reader will immediately be dispelled of his doubt. Deepening Airbnb case, the reader is likely to wonder why the tourism sector was chosen as a reference point. Tourism is one of the industries that has been most revolutionized in recent years and that has decided to focus on the sale of an experience and not just a service: it would be interesting to observe the growth of the now well-known digital platforms such as Expedia, Airbnb or Booking.com and the failure of hotel giants that dominated the market for decades.

The third chapter explores the methodologies used in the research field applied to the consumer products industry, studying the emotional journey of costumers inside a supermarket. Therefore, the crucial part of the chapter concerns the description of two case studies conducted by one of the most important research centers in the field of market research and political polls, Ipsos. The research team has decided to create an experimental supermarket in which, through tools such as Eye tracking, it is possible to obtain data whose reliability is impossible to replicate with traditional techniques.

Chapter 1: Neuromarketing tools

1.1-Adaptation of strategies to the modern socio-economic environment

Neuromarketing uses state-of-the art resources to understand the factors that push consumers to purchase. Authors have given various definitions to Neuromarketing, but the substance remains unchanged: a set of useful tools coming from neurosciences that can assist organizations figure out people's purchase behavior in order to establish ad hoc STP[1] strategies or to build profitable advertising campaigns.

The area of Neuromarketing can be treated as a new scientific field, an interdisciplinary field, that seeks to connect studies in Marketing with neurosciences. Neuroscience's range of action hugs interesting research areas such as chemistry, computer science, physics, medicine, psychology and robotics. The scope of these techniques seeks to take advantage of the diversity in neuroscience research lines and studies has to be enlarged not only to brain or to the central nervous system but should embrace psychological and cognitive processes.

Nowadays consumers have developed a strong attentional barrier to advertising triggers. It means that the rational part of consumer's brain, called Neocortex, has become difficult to overcome. This is confirmed by an interesting data: desktop adblocking grew by 8, reaching 257 million users between 2020 and 2021[2].

According to research conducted By Microsoft on a Canadian sample in 2015, our attention span is shrinking: in 2000 has been recorded an average of twelve seconds, in 2015 an average of eight seconds, even lower than a goldfish, which is nine seconds. The study identifies the dramatic increase in the use of smartphones as the primary cause of the progressive deterioration of our attention span.

We often use to say we don't have enough time in the workday. Actually, our biggest problem is a lack of attention and focus. A study published in the Harvard Business Review showed that if we are engaged in a task that requires concentration, a brief distraction like looking a text message can take us up to twenty minutes to recover.

Julian Birkinshaw and Jonas Ridderstråle, two of Europe's most influential experts on leadership and business strategy, in their book "*Fast Forward: make your company fit for the future*" note that information is no longer a limited resource, so it cannot be a source of competitive advantage for companies. Instead, it is precisely attention that is the capability on which companies will be able to base their competitive advantage in the future. Martin Lindstrom, one of the most important authors for Neuromarketing, refers to a dramatic fact: more than eighty percent of new item placed on market fail in the first three months after launch, despite huge investments in communication and supply chain's optimization[3]. Companies must consider this waste of resources, especially in a much more ruthless and competitive market perspective.

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[1] Segmentation, Targeting, Positioning.
[2] Pagefair AdBlock Report (2021).
[3] "Buyology: Truth and Lies About Why We Buy" (2010)

The amount of information available in the world increases by 66% each year, as Kevin Kelly, founder of Wired Magazine, and Hal Varian, chief economist at Google, have calculated. In 1971, Nobel Prize Herbert Simon pointed out: "In an information-rich world, this abundance of knowledge results in the scarcity of what information consumes. It is obvious what is information consuming: the attention of the receivers. So, information abundance generates attention poverty"[4].

In this context, the communication strategies and then the advertising methods must be revolutionized, with the integration of new channels and new points of contact with the consumer.

Neuromarketing can be considered as the new frontier of selling and influencing.

1.2-Social change and evolution of methodologies

Research and consulting companies, opinion leaders and marketers consider Neuromarketing as one of ten innovation models that will radically change the way we do business. After decades of experiencing, researchers were able to conclude that marketing operations cannot be summarized and aimed at a mere war between products. The best-selling product is not the best product in terms of material benefits, but the one which generates a positive perception. Such perception is captured by the brain without the permission of consumer, and it is managed by the Reptilian Brain, which according to Paul MacLean's studies is the part that cares about primary needs, such as sleep, hunger, and thirst[5]. Marketers who work for the strongest brands have long understood it and they invested great amount of resources to improve the tone of voice of their communication in order to create a correct brand identity.

The changing social context highlighted the partial efficiency of traditional qualitative research stating the incapacity of self-assessment with regard to the consumer in the purchase deed. Nowadays researchers showed that interviews and focus groups have hidden numerous trouble spots, such as unconsciousness of the consumer, inability to narrate the experience, influence of the interviewer and shyness on touching some topics.

Maybe the most important difference among these two types of proceedings resides in the role of *unconsciousness:* traditional methods have employed their strengths on the collection and storage of data based on the respondent's rationality and cognitive processes. Unconsciousness means that not even the respondent can explain the effects of commercials on him/herself. Neuromarketing aims to measure psychophysiological reactions of subjects exposed to a precise impulse, translating the collected data into indicators and measuring

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[4] "Designing Organizations for an Information-Rich World". H. A. Simon (1971).

[5] "Triune conception of the brain and Behavior". P. MacLean (1973).

changes in them throughout the duration of the tests. Neurosciences plays a crucial role in providing several tools that can help capture responses to stimuli received.

Obviously, if no area of the brain shows any mutations after having been exposed to a commercial, then this stimulus is not successful. An effective marketing strategy usually causes some unintentional reactions in the consumer's body: it can be a change in blood pressure or contractions in the nervous system detectable by instruments.

1.3-Limbic system: "chief emotion manager"

The wideness of products offered, nowadays, is leading consumers increasingly to choose without necessary information to catch the differences between alternative products. We are witnessing a homologation in the product overview, thanks also to more emotional shopping, sacrificing an accurate and detailed search for the best item.

Many purchases decisions are led by cognitive processes: people interested in buying an insurance policy tend to weigh factors such as amount of coverage of the cost the size of any deductible. But other choices are driven by the heart, purchasing an item which guarantees greater satisfaction than optimization.

As mentioned above, people are often unable to justify their choices so it's hard for a marketer to obtain answer objective answers. Nevertheless, it is possible to state that our mind manages our emotion without us noticing out, through the limbic system. This department of our brain is made up of the cortex part and a deeper subcortical part: the first one consists of the hippocampus, memory manager, and the second one is composed by the amygdala, neural complex that coincides with the archive of our emotional memory. So, while the hippocampus reminisces the events, amygdala judges its emotional valence.

How interesting emotions can be caused? Starting from the Arousal Valence Model[6], marketers' task coincides with the study of the upper part of the chart, the one that represents emotions that stimulate people to react.
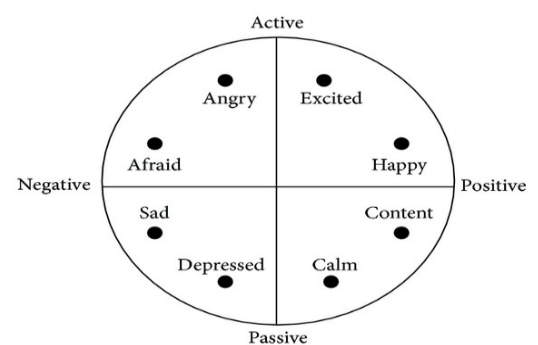
Clearly, most desired feelings are pleasure, happiness and gratification. These emotions are handled by dopamine, a neurotransmitter that is produced during fulfilling situations. It is also considered as a natural drug because it cannot be controlled easily: dopamine leads the human being to a continuous search for

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[6] "Remembering pictures: Pleasure and arousal in memory". Journal of Experimental Psychology: Learning, Memory, and Cognition. Bradley, M.M; Greenwald, M. K.; Petry, M.C.; Lang, P. J. (1992)

pleasure. Furthermore, it is released also when the consumer wishes a future reward: a correct marketing strategy can make customer "dream" the product or service.

Finally, it is possible to assume that the limbic system stimulation is a very useful weapon in a marketer's arsenal, but this must be accompanied by the building of a relationship of trust with the customer: an unconscious reaction is followed by a conscious and, eventually, rational one. To push a user to repeat the purchase of cookies in an e-commerce is more functional to rely on logical reasons such as a discount, rather than aiming to raise the level of dopamine.

1.4-Brain Imaging

What are marketers referring to when they talk about Brain Imaging? This technique allows to visualize the cerebral activity both before and after having subjected a costumer to a stimulus: two maps are derived and from the comparison is possible to verify the areas of the brain that have been activated by the reception of the impulse.

Originally, these techniques were used to identify anomalies resulting from accidents and illnesses: studies on stroke victims, for instance, have enabled to learn many things about brain plasticity. Through Brain Imaging many neurological dysfunctions have been diagnosed, such as depression, schizophrenia, bipolar disorder and also made it possible the identification the symptoms of stroke and dementia before they occur.

Nowadays, Neuromarketing disposes of six technologies which are distinguished by the spatio-temporal through which each tool is able to measure brain activity. Before starting with their listing, it is necessary to clarify the concept of spatial resolution and temporal resolution: the first one refers to the minimum distance through which is possible to identify two different cerebral processes; the second one coincides with the time interval between the outcome of the event and the occurrence of the detected event.

For instance, consider a measurement based on blood flow detection: the flow reaches the brain a few seconds after the moment of activation. Those few seconds coincide with the time resolution, which may vary depending on the technology or instrument used[7].

1.4.1-Electroencephalogram (EEG)

This tool uses electrodes attached to the scalp and measures the electric field pattern in the underlying brain region. It is characterized by high spatial and temporal precision, but, on the other hand, the quality of the information that the EEG can provide depends on the number of electrodes used, as the brain signal is very

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[7] https://hbr.org/2019/01/neuromarketing-what-you-need-to-know

weak and scattered on the surface of the skull. In addition, it should be noted that the EEG records the electrical activity referred to the superficial areas of the brain and therefore has little sensitivity for deeper structures.

Electrical activity in the brain is characterized by strong waves that are synchronous activity of large neuronal populations. Nowadays, neuromarketing research aims to understand how various oscillations affect the brain and mind. For example, Beta-waves occur in motor areas when the brain is preparing for movement, while Gamma-waves have long been thought to link perceptual abilities in complex scenarios.

Thanks to high spatial resolution, and also thanks to their practicality, it can observe the decision-making processes and memorization processes that are activated when an ad is seen.

1.4.2-Functional magnetic resonance (fMRI)

This type of detection measures the blood flow inside the brain: the more active an area is, the more blood flow to it increases. This tool has the substantial advantage of being able to observe with high resolution small structures and those that are deep in the brain.

The fMRI has been developed by Read Montague and nowadays coincides undoubtedly with the most used brain imaging. FMRI can be boast of an excellent spatial resolution, while his temporal represents one of his weaknesses.

Probably, one of the main reasons of its success is due to the possibility of recording brain signals non-invasively, without using ionizing radiation exploited in other methods.

1.4.3-Magnetoencephalography (MEG)

MEG measures changes in magnetic fields induced by neuronal activity. His main disadvantage is surely the high cost, because it needs of a dedicated room, magnetically shielded superconductors and quantum interference detectors to measure weak magnetic signals in the brain. Equally to EEG, MEG also is more sensitive to superficial cortical signals and has the same high temporal resolution, but a much higher spatial resolution.

1.5- Biophysiological indicators

Other "toys" allow researchers to measure biophysiological responses that are useful to identify which stimuli are the most effective in inducing the consumer to react unconsciously. These types of reactions are particularly interesting because of their close connection to the emotional apparatus: the study of the emotional system has gradually developed with the growth in the use of social media, a communication channel of vital

importance for the relationship between organizations and a target with a very large spending portfolio and a weaker attentional barrier to advertising triggers, such as that of young people.

The human organism continuously interacts with the external environment through the elaboration of adaptive behavior. Adaptive behaviors are self-regulatory mechanisms that often occur automatically and do not interact with the person's field of consciousness. Some of these processes are managed by the neurovegetative, endocrine and immune system.

SCA technique examines alterations in the conductive activity of the skin due to sweating. In this process, sweat glands enlarge, causing a decrease in resistance to the passage of electrical power through the dermis. External emotional stimuli, such as a sudden noise or hearing a swear word, cause a drop in electrical resistance in some skin areas, particularly on the palmar and soles of the feet: the same effect can be gained with internal emotional stimuli, for example imagining scary scenes, or otherwise with emotional content. This transient response, which is called *psycho-galvanic reflex,* has a characteristic waveform with a rise time of about one-two seconds and a longer fall time. The time required for the value of the electrical resistance to come back to the pre-stimulus level is about twenty seconds. This effect also depends on the environmental temperature and tends to disappear if it exceeds thirty degrees, so the ideal temperature for recording psychogalvanic reflexes is between twenty and twenty-eight degrees.

1.5.1- Electrocardiogram (ECG)

ECG is considered by researchers to be an excellent interpreter of the emotions felt by individuals. Its use is recommended in neuromarketing research when it is not necessary to identify the emotional response in a unit of time, as is the case with the EEG, but it is necessary to detect the emotional dynamics of a longer experience, such as an experience in an airport lounge or a visit to a museum. We have talked about how to use it, but how does it work?

The electrocardiogram measures the electrical activity of the heart: the heart produces an electrical field that can be easily recorded and provides useful information about whether the person experiencing a sensory experience is producing electrical changes associated with the emotions they are experiencing. Electrical impulses originate in the myocardium and generates differences in electrical potential that vary in space and time. For instance, sensors attached to the skin at the heart can be used to detect how the electrical activity of the myocardium varies when watching a documentary or reading a book: electrical traces detected at any given time can show, based on frequencies and size of the electrical waves, whether the person is in a state of fear and stress or in a state of relaxation.

1.5.2 - Electromyography (EMG)

EMG measures muscle tension and is particularly useful for detecting changes in facial muscle tension. Face is the part of the human body with the highest concentration of muscles, just think that when we smile the brain activates from twelve to seventeen muscles and when we are angry the number rises to more than forty.

It might be confused with FACS system (Facial Action coding system): unlike the FACS, EMG measures the electrical intensity associated with facial muscles generated by their contractions thus producing traces that can be linked with the triggers used in the tests, such as sounds or tasting products, in order to gain useful information to better calibrate the duration of exposure or to verify whether there is an interna trigger that is activated in response to an external one.

1.6-Eye tracking

It is with our eyes that we tend to first explore the world and direct our attention to interact with external environment. Sight is the sense on which we rely most to orient ourselves in our lives. Marketers know how important it is to visually attract the consumer to direct their choice, whether on the net or in a supermarket.

Eye tracking makes use of the eye-tracker, a device equipped with infrared and a camera that allows eye movements to be followed and tracked in response to a given impulse. Thanks to eye-tracker goggles, it is possible to study how a potential consumer explores a shelf in front of him and on which products his gaze rests. This tool is then used to evaluate the effectiveness of packaging, website's landing pages, product placement, commercials and videos.

However, it must be said that not everything consumer's gaze encounters then falls into his visual focus: researchers claim that only eight percent of what the consumer intercepts is projected onto the fovea, which coincides with the most sensitive and central part of the retina and is therefore available for detailed analysis. Thus, researchers began to investigate the relationship that inks fixation point and attention threshold: when the consumer looks at a product or an ad, attention drives eye movements in response to two types of factors that work in synergy[8]:

1. "Bottom-up" factors, those that capture the individual's brain because they are able to enhance a product: for instance, color, shape, size, brightness can become crucial in a purchasing decision.
2. "Top-down factors", those determined by consumer needs and expectations: they include emotions.

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[8] "Algorithms for Defining Visual Regions-of-interest: Comparison woth Eye Fixations. IEEE Transactions on Pattern Analysis and Machine Intelligence". Privitera, C. M., & Stark, L. W. (2000)

When consumer reads a text, his eye makes sudden eye movements called saccades. These saccades typically last between 20 ms and 200 ms. Between saccades, the eye stays still on average for about 200-300 ms: this is a fixation. Fixations are critical for our brains to process what we perceive visually. The set of fixations and saccades represents the "*Scanpath*", that represents the path drawn by individuals's eye.

The figure[9] describes the average path of the gaze of a western web user who is faced with the wealth of information offered by a google page after the insertion of a particular keyword: he is usually subject to perform horizontal saccades, from left to right. The difference between vertical and horizontal saccades is in how the information is analyzed: for instance, through the eye tracking methods, researchers have been able to ascertain that the vertical saccades describe the route of a user that is not effectively reading the page, but he is only scrolling it. The figure shows the heat map of our fixations: it is important to note also the text section inside a site is always the first one at the beginning of the content and it also explains that the most coveted ad placement coincides with the first of the google page, because it is the one that ensures greater visibility and allows to optimize digital communication investments (SEO).

Human's brain is lazy and wants everything right away, and if it does not easily find what it's looking for, it either abandons the path or finds shortcuts to get there. Reading textual content is not an easy task for our brains. We usually prefer scanning a text than reading it: reading online always require some cognitive effort that human's mind does not like. The workload (cognitive load) is one of the metrics that is usually considered when evaluating a platform in a neuromarketing analysis. The correct level of workload allows the brain of the tourist to proceed easily towards the booking of his room or bed and breakfast, for example. Indeed, when the textual content is inserted in a site or platform, the TMI (Too-much-information-effect) should be considered, which can weigh down the navigation and can penalize the attractiveness of the offer.

With regard to purchasing in a physical location, such as a supermarket, researchers from Massachusetts Institute of Technology (MIT) Russo and Leclerc, have established that visual scanning process that occurs when choosing a product can be divide into three steps[10]:

1. Orientation: this phase is quick and takes places mostly at a non-conscious level. It consists of a general overview of the products exhibiting.
2. Evaluation: the second step of the process is the longest and requires greater effort, including cognitive effort. Evaluation means comparison between products: the consumer is used to build a mental map in which he encloses the options present starting from the evaluation of a Total Set of alternatives and

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[9] https://www.seoclerk.com/faq/18969/What-website-heat-map-are-you-using
[10] "Modeling eye movements during decision making: a review". M. Wedel. (2022)

then arriving at the Choice Set, considering only the options that he would take seriously in analysis for a potential purchase.

3. Verification: the last phase corresponds with a further examination of the chosen brand and often of its physical-sensory characteristics: customers, before finally selecting the product and putting in the cart, are used to touch it and read the label in detail to make sure that the choice is the most suitable one.

Obviously, the timing of the entire process can vary greatly depending on the involvement required by the purchase or whether it is an optimization or satisfaction decision. To this should be also considered the cognitive load, which depends on the type of product and the ways of use.

1.6.1- Captology applications

Today, all digital objects and online platforms are designed with the goal of stimulating certain behaviors in those who use them, and they are distinguished from others by their qualities as media and social actors. By virtue of these characteristics, they are the subject of discipline called Captology, born in the nineties thanks to B.J. Fogg, founder and director of the Stanford Persuasive Technology Lab. Captology's gaze is turned to the connection that binds the latest generation devices to the human mind with the aim of inducing specific behaviors and reactions.

Captology's developments in social and technological areas have led to the spread of IT products, including websites, applications, and social networks, that are increasingly powerful of user experience[11]: captology knowledge can come in very handy for companies to attract customers and engage them in a satisfying and lasting relationship, and not just a buying one.

Social media is one of the environments where it makes the most sense to talk about the captology-advertising duo. Thanks to the personal data they have at their disposal, they are particularly effective in inducing people to take certain actions. Using profiling, they intercept the target at the right time with the most appropriate stimulus. Under these conditions, it is easy for the individual to act as hoped: for example, he or she could easily sign up for a site's newsletter or arrive at an e-commerce product page or fill out a contact form to receive the service he or she needed. It must be said that also in this field, unawareness of the subject plays a fundamental role: the communication tool nowadays is able to make the internet user feel completely at ease and in self-control, maybe even stretched out on his couch, while user profiling provides social media with the necessary data to induce the consumer to buy online.

Why is persuasion more effective on social channels? Because it doesn't' stand out. Banners on websites, for example, are not as effective because they require an action that the user don't want to do, having landed on

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[11] "Persuasive Technology: Using Computers to Change What we Think and Do". B.J. Fogg. (2003)

the site with other intentions. Often, the biggest difficulty for companies is not to be seen as "hidden persuaders"; persuasive content that works must be able to naturally lead the user to perform a sequence of spontaneous actions.

Unfortunately, even Captology presents contraindications and risks: it is important to remember that, for instance, the ultimate goal of Neuromarketing is not to target compulsive and hectic consumers, as their remorse will drive them to negatively influence others by compromising the health of cash flows. The same applies to the captological field.

The best way to adopt these methods is to aim to involve aware customers, who decide only after having evaluated all the pros and cons of their potential choice; in this way it is possible to build a bond fed by continuous stimuli that keep the relationship alive even when consumers are distracted by their daily activities: sending a notification on the smartphone to inform the customer that his favorite product is on sale will make him feel object of a healthy attention, and this may encourage him to return to the site or to the store even if he did not feel the need.

1.6.2-The Fogg Model

B.J. Fogg analyzed the differences between the two main social networks of opposite cultures, western and eastern one. This research was conducted for the Stanford University and he was assisted by Daisuke Lizawa.

The conclusion of the two researchers was that the two platforms were both designed specifically to drive as many users as possible to create profiles, invite friends, react to content creation and return to the site as frequently as possible. The analysis revealed the differences between the two social networks: Facebook's persuasive design is more assertive and mechanistic while Mixi's one is more subtle and indirect.

Anyway, the two social networks presented also many similar features.

However, Fogg went far beyond cold scientific research: in 2007, in what was remained in the annals as "the
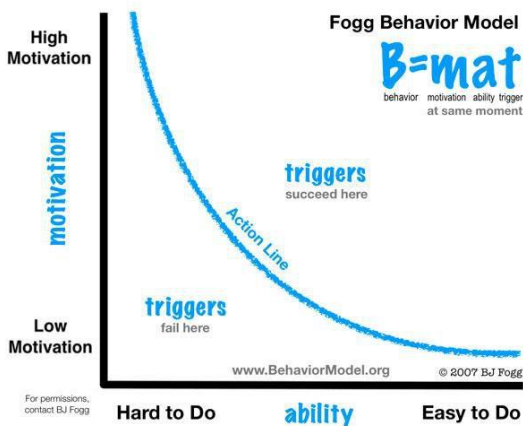
Facebook course", he invited his students at Stanford to create free apps according to his guides and to make them used by users of the famous social network: the result was that millions of people immediately began using these products and, when the advertising was triggered, some students suddenly began to earn much more than their professors.

Underlying Fogg's success as a psychologist, academic and scientist is his model of human behavior, which has a physics

equation at the base[12]: a behavior would be nothing more than the result of the combination of three factors: motivation, ability and trigger. A trigger stimulates a behavior if the subject is sufficiently skilled to perform the required action (ability) and motivated to do so (motivation). The mentioned relation is shown in the chart[13].

But what might be its practical application? It's enough to make every task of daily life easy. Indeed, simplifying costs less and succeeds faster than motivating: the success of most the application in circulation is linked to the trivial fact that they make the lives of those who use them easier.

In conclusion, it can be said that the rapid expansion of digital research is significantly changing the landscape of sales and persuasion techniques: such radical mutations will have to be matched by an evolution in the organizations' approach to the community, insisting on new communication channels and new categories of investments that will be useful in modern economies.

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[12] "Tiny Habits: The Small Changes That Change Everything". B.J. Fogg. (2019)
[13] Researchgate.net

Chapter 2: Neuromarketing digital applications

2.1- Practical Application: Neurosciences for tourism development

Tourism is an economic activity that can create growth and employment, while contributing to the socio-economic integration of rural and remote areas. This industry serves as a springboard for many developing countries eager to compete in the modern framework of global financial markets. In recent times, it is easy to see how the tourism industry, although of great importance in world economies, has been very sensitive to external events, such as the financial crisis of 2008 and the Covid-19 pandemic of 2020: Eurostat data records a decline for some countries of 8% between 2008 and 2009.

Insiders know that in today's insidious landscape, the tourism industry must innovate its offer, aiming at a paradigm shift in communication and demand management and diversifying services by making them more attractive to the target audience considered. Neurosciences can be treated as part of this scenario, now increasingly used by operators who are trying hard to adopt competitive strategies in step with the times.

Technology advances have bought a radical change in the world of tourism, inexorably influencing the way consumers think and make decisions. The expectations and needs of travelers are totally different nowadays, who can do quick searches on the web, sift through a wealth of information, compare different offers, plan and book their trip relying on paying methods that are considered more secure and accessible. Such complexity has given accommodation managers the opportunity to seek out new elements that, if adopted and used to best effect, can create lasting competitive advantages.

The application of Neuromarketing to tourism industry, also called Neurotourism[14], allows to understand how important is to generate emotions, reasons and cognitive processes in order to build an exceptional customer experience: through such techniques, operators will be able to personalize the offer by facilitating loyalty.

2.2- The digital tourism market

As mentioned, tourism like many other economic industries has undergone considerable transformations in recent times. But what were the factors that led to these paradigm shifts? Two elements can be highlighted: increased demand and technological innovations.

For a long time, the industry was highly rigid and standardized: tourism market was managed by supply and the tourist had to adapt to it. In this evolutionary context, the turning point was the introduction of technologies

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[14] "Neuromarketing per il turismo online: Le neuroscienze al servizio degli hotel e delle strutture ricettive". C. Zamuner. (2021)

that radically changed the scenario and goals. Nowadays, information is easily acquired by demand, which has free access to vast pool of content and tools.

Therefore, the combination of these two factors has boosted the exponential growth of market competitors, facilitated the opening of new communication channels, and contributed to the development of new types of consumers. Obviously, traditional marketing mechanisms have totally lost their effectiveness: promotional and advertising-type communication no longer works and what counts today is market perception. Consequently, competition no longer concerns products but market's perception of them: the leader is the one who is recognized as the best. Effective promotion and communication must enhance the differences with competitors, in order to position themselves in the tourist's imagination by influencing their final choice.

2.3- The buying process of today's traveler

Why do people decide to travel? Do they do it just to discover new places or to meet new people? It is not easy to provide a precise answer to these questions.

Scientists believe that the first reason that pushes people to move is to enrich the baggage of positive memories. As mentioned above, memories and emotions are closely related. One of the most emotionally intense purchasing processes is the one that leads a person to book a holiday: the whole path is studded with positive and negative emotions and moods such as anxiety, joy, hope, surprise or sadness. To the eyes of those not involved in neuroscience, it might seem strange to note that a journey does not begin with departure but starts at the moment the potential traveler picks up inputs form outside. These inputs can come from friends who tell their experience or an ad on social media: the stimulus leads the subject to actively look around for opportunities and attractive destinations.

The second step concerns the search for the information necessary for the cost-benefit comparison. The subject examines alternatives proposed by websites by travelling with the mind and checking which potential experience can reserve for him the most intense sensations. It can be said that the website of an accommodation facility is the gateway to which the user is welcomed: its navigation experience is a "journey within a journey" consisting of expectations, emotions and goals.

There are two structures in our brain that are considered most responsible for the memorization process: the amygdala and the hippocampus[15]. The amygdala gives emotional-affective meaning to the information we perceive while hippocampus plays a fundamental role in the formation of short- and long-term memory. Thus, emotions can be considered as the glue of our memories.

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[15] Par. 1.3: the role amygdala and hippocampus.

The big players, such as Booking.com or Airbnb, now offer a service that goes beyond the simple booking but becomes an efficient support tool for the tourist, before, during and after the journey: this tool exploits the communication increasingly aimed at activating a deeper emotional involvement, to put the traveler at ease and build loyalty. Nowadays, it is important to invest the necessary resources not only in the customer experience in physical terms, choosing the most suitable staff or improving the quality of the furniture, but also in the virtual experience.

According to research conducted by Google in 2017, the online tourist generally possesses three characteristics:

- **Curiosity**: 25% of users who search for information about their holiday do so on a daily basis: when the idea of a trip is grafted in our mind, we are stimulated to do research all the time.
- **Need**: 92% of travelers book on another site if their needs are not met: competitors are "one mouse click away".
- **Impatience**: 85% of travelers do not book on a slow website. Tourists are hungry for information and prefer to change sites if they cannot get it immediately. The first thing an internet user perceives is the speed of opening a site, which is implicitly associated with efficiency, simplicity and reliability.

2.4- The seven principles of persuasion: Robert Cialdini

The theorization of the levers of persuasion dates back to the 1980s specifically, their birth year is 1984, the year in which American psychologist and marketing professor Robert Cialdini published his book *"The Psychology of Persuasion"*, a work that would leave a clear mark on the world of psychology applied to marketing.

A careful reader might ask: "Almost forty years have passed, are they still viable or has their time passed?" or "Are they also applicable to the web world?". Within Cialdini's work there are obviously no references to the internet, but these principles are more present than one might think. Although almost forty years have passed, they are still valid today and are used on a daily basis in e-commerce, including tourism. It should also be pointed out that Cialdini mentions six principles in his best-seller. But weren't there seven? The seventh lever of influence has recently been declared.

The seven levers of influence[16] can be listed as follows:

- **Mutuality**: people are more likely to say yes to those from whom they have already received something in return. Experience pins a perfumery or herbalist shop is an example for this: the technique regards

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[16] "Neuromarketing per il turismo online: le leve di persuasione per aumentare le prenotazioni online". N. Trentin. (2021).

the gift of some samples at the time of purchase. Receiving samples gratifies the customer but unconsciously makes him feel obliged to return to the same shop when he needs a cosmetic product.

- **Scarcity**: the scarcer a good becomes, the more people are attracted to it. Therefore, any message pointing out the scarcity of the product, such as "last two articles available", puts the customer on the alert, makes him perceive the danger of losing it and consequently stimulates purchase.

- **Social proof**: people tend to act in relation to the behavior of others. Reviews, for instance, allow people to attribute a value to that place and help tourists to optimize choice process. It can be said that reviews are the strongest tool for social proof: 90% of purchases are led by reviews.

- **Authority**: people tend to follow and respect the opinions of experts or those they consider authoritative. Websites such as TripAdvisor or Booking.com reward successful accommodation facility by issuing certificates of excellence testifying to quality. Moreover, considering authoritative means trusting either an expert in a particular field or a public figure whose notoriety leads to influence the judgement on a particular product.

  Obviously, it would be foolish to consider George Clooney an expert on coffee or Peyton Manning an expert on biscuits, but in these cases Nespresso and Mondelez realized that such characters could access the consumer's mind and persuade him or her at the time of purchase.

  The same concept applies to influencers. Influencers work through the communication channel of social media, have specific interests which bring them to create content related to that topic: in this way, the world of influencers is also connected to the concept of authority.

- **Consistency**: people want to be consistent with what they have previously said or done: having made a decision or a commitment, people prefer to defend it, even if they are no longer convinced, so as to protect their image. Applying this lever to marketing, accommodation websites keep a substantial concept in mind: it is always necessary to approach the consumer by requiring a small initial commitment: such small action slowly bring him or her closer to the services offered by initiating loyalty.

- **Liking**: people prefer to say yes to those they like. A person can be liked for various reasons, including having some common passion or sharing a lifestyle. Tourist companies manage to apply the lever of liking by getting to know their customers in depth so that they can personalize their offer, allowing them to feel important and to please the consumer.

  But how they know their costumers? Social media, for instance, are very useful because they allow companies to get to know the interests of a specific target group, or tools such as Google Analytics to understand which pages of the website are the most visited or those on which they spend the most time, from which device they prefer to view the site, and much more.

- **Unity**: people like to feel part of a group. Brands can boost conversions by communicating with their audience like they're family. The most attractive accommodations allow users to enter a new world in which they are fundamental elements of a shared values and objectives.
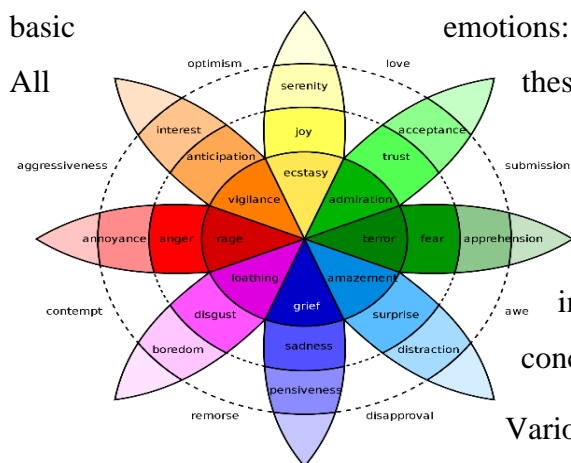
  Before the advent of digital, this customer experience took place mainly during the stay, but nowadays accommodations must adopt this approach before and after the holiday through a series of techniques that lead the customer to believe in the values and goals that will presumably bring to loyalty or positive reviews.

Why are these principles so efficient? The answer to this question lies in the first chapter. Cialdini realized that the customer must be led towards a non-cognitive and emotionally charged choice path. The limbic system of internet users has proven to be very sensitive and tourist companies have comprehended that investment in Neuromarketing methods is increasingly a wise choice.

2.5- Emotional analysis

As explained above, emotions can be considered as the valuable element with which people can remember other people, places and events. Therefore, it becomes of utmost importance to learn how to recognize such emotions in order to understand what the user's state of mind is at the time of the search.

Psychologist and researcher Robert Plutchik created the "Plutchik model"[17] that shows that there are eight basic emotions: joy, trust, fear, surprise, sadness, expectation, anger, and disgust. All these emotions can take on different intensities and can also mix with each other, in turn creating new emotions. Hence, emotions can become even thousands and their identification allows to convey them in the best possible way. This capacity for emotional involvement is also called empathy and is strictly related to the concept of user experience (UX).

Various tools can be used to empathize with people, including the user journey. They are schematic, synthetic representations of all the stages and interactions between people and product or service. They are constructed from a timeline on the horizontal axis: it lists all the phases, the activities performed by the person in that scenario. Next, the experience is analyzed or rather what emotions, thoughts and actions took place in each step. Finally, possible opportunities to improve the experience will be studied.

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[17] "Emotion: a Psychoevolutionary Synthesis". R. Plutchik. (1980)

For a hypothetical hotel booking there are certain stages to consider: accommodation research, booking on the website, travel preparation, stay in the hotel, return and evaluation. These steps will be assessed one by one to understand how accommodations can sympathies with people, understand what they need at each stage:

- **Accommodation research**: in the first step of the user journey, people are looking for inspiration and are therefore curious about the opportunity to be seized at that moment. Operators are expected to understand which tools or social channels the target audience uses to conduct the search, which stimuli are the most effective in driving people to travel and which features make a difference in their choice of accommodation.
  Since in this first phase the prevailing emotion is curiosity, the website must be able to make the user dream, leading him or her to a less cognitive choice as possible.

- **Booking on the website**: this is the stage where the customer feels the fear of not choosing the most suitable option. Many sites such as Booking.com have initiated the choice of an additional fee that would guarantee full or partial money back (free cancellation) in the case of booking's cancellation. This is a very effective technique that works as a kind of insurance for customers, leading them to make the decision more calmly.

- **Travel preparation**: it often happens that weeks or months pass between booking and departure. This period of time is very delicate as the client may feel abandoned to his expectations, unable to build a precise idea of what he will experience on holiday and how it will be structured: his positive feelings may turn into negative emotions such as anxiety and anger. The main goal of the tourist companies is to clarify the customer's ideas by giving many valuable resources such as guides, extra services, upgrades, treatments, paid excursions so that he can have concrete expectations.

- **Stay in the hotel**: the crucial moment has arrived. Here all customer experience must be fulfilled. The accommodation provider is expected to ask for feedback to avoid nasty surprises later.

- **Return and evaluation**: the relationship between customer and structure does not end with check-out. Customers are the greatest ambassadors, so it is the duty of the companies to find the best channel with which to continue communicating. If the previous stages have been conducted correctly, the customer is likely to leave positive reviews that will prompt other users to evaluate the accommodation. The management of reviews becomes crucial for loyalty and word of mouth.
  Even the best accommodation or the best hotel may receive negative reviews: learning from them can send a signal of a spirit of innovation, listening to the customer and responsiveness of the management.

In conclusion, greater investments in neuromarketing enables empathy with all types of targets and then improves the customer journey: even the largest structures, where it is more difficult to have a customer-facing perspective, are taking steps to study new techniques to improve the experience of each individual consumer.

These structures have also decided to reorganize their operational set-up, moving from vertical unresponsive hierarchical organizations to *learning organizations*[18].

2.6- The power of a picture

Image is a key element in tourism promotion as it plays a crucial role in influencing the decision-making choice of potential tourists. People do not choose a destination solely on the basis of purely rational logics: emotions, as seen above, play a key role, influencing needs, motivations, imagery and travel experience.

An image holds up a concept and allows two different destinations to be compared through the sense of sight, helping the mind to get a more concrete idea of the place considered.

Experiences are not self-generated but environmentally induced. When studying the meaning of the term experience in philosophy and psychology, it is possible to notice the connection between the meaning of experience and person. In philosophy, experience is considered in relation to knowledge: it represents the sensitive factor of the cognitive act and concerns that which can be the object of sensory perception. In psychology, on the other hand, experience is seen as the expression of different components (such as cognitive or emotional one) that can be traced back to the multidimensional nature of the human personality, which influence purchasing and consumption behavior.

According to Bernd Schmitt, professor of International Business at Columbia University and founder of the experiential marketing theory, there are five types of experiences that can enrich the buying process. These different experiences are called *strategic experiential modules* (SEMs)[19] and consist of a series of different experiences acting on an increasing scale of involvement.

Sense experience

It represents involving sensory perception, making use mainly of the consumer's five senses: sight, hearing touch, taste, and smell. For instance, pictures to be taken by tourist companies or accommodation facilities must meet standards of brightness or contrasts that visually engage the user.

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[18] "The fifth discipline". MIT School of Management. (1990)

[19] "Experiential Marketing: How to get Customers to Sense, Feel, Think, Act, Relate to your company brands". B. H. Schmitt. (2011)

Feel experience

It refers to clients' inner feelings and aims to create affective experiences ranging from slightly positive moods to strong emotions of joy. The picture[20] to the side contains a person and a face, which are natural attentional connectors. Moreover, in men the reproductive instinct would have shifted the focus to the image. Finally, the sparkle and shine of water, primary source of life, is irresistible to human brains.

Think experience

The think techniques appeal to the intellect and aims to create cognitive and problem-solving experiences that engage customers creatively; it therefore refers to customers' thinking through surprise, intrigue and provocation. These are widely used for technology products but are not limited to these: they are also used in product design, communication and many other industries.

The use of this process is especially required for decoding advertisements with very little text and hence advertisements that take very few seconds to be understood.

This picture[21] depicts two people having breakfast. Through some neuromarketing studies conducted using the Eye Tracker, it was possible to see how the observer's gaze first focused on the faces of the subjects: regardless of their culture, people all over the world understand what it feels like to laugh or cry. The user's cognitive is to empathize with the subjects by understanding that is possible to experience such emotions in that place, which would help to increase the store of positive memories. Later, the customer's eye is drawn to the strong orange color of the orange juice, which gives the feeling of freshness and well-being.

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[20] https://www.vogue.com/
[21] https://it.123rf.com/

Act experience

The "act" perspective aims to influence bodily experience, lifestyles, and interactions. This approach is directed at improving consumers' lives by consolidating their bodily experiences and showing them alternative lifestyles, interactions, and ways of acting.

A well-known example of Act marketing is Nike's "Just do It" campaign, which uses famous athletes in action to transform the exercise experience.

Messages are persuasive and provocative to push potential customers to try new things, which are only possible through the product or service being sold. For this reason, situations and behavioral consequences are usually shown, such as the picture[22] on the left which depicts a girl participating in a massage session, an activity that is rarely conducted every day.

Relate experience

Is not only about the personal feelings of customers, rather it relates them to other individuals and other cultures. The symbol of the "relate" methods is Harley Davidson: it is not just a motorbike brand, but a way of life. Customers consider Harley products as part of their identity and the gateway to an entire community. Therefore, it proposes the idea of joining a group of people with the same interest and aspirations, offering experiences that refer to the intrinsic desire to belong a group or social class.

Accommodation facilities also target their customers through images, so as to attract the desired people through criteria of age, economic status or education.

2.7- Content Marketing

As noted in the previous paragraphs, tour operators needed to modernize their strategies to make them adaptable to the new media: Neuromarketing is a child of the continuous evolutions that the world has gone through. New strategies have emerged from these new techniques that have the common goal of addressing the attention and rationality of consumers by making them weaker and more persuasible.

One of the most popular techniques for the tourism sector in recent years is Content Marketing.

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[22] https://www.groupon.it/

What is Content Marketing about? The true meaning of Content Marketing lies in the use of content. Bill Gates' well-known statement "*Content is King*" from 1966 is as valid as ever. Content published on the web has the power to enhance online reputation and lend authority to the brand. Obviously, it is also important to be easily found: SEO[23] positioning on search engines is crucial. It is consolidated by practitioners as a decisive strategy for the present and essential in the future and sees the need for brands to tell their story, produce quality content and be protagonists on social media.

According to an analysis carried out by the Domo platform, every minute 100,000 tweets are sent around the world, 48 hours of videos are uploaded on YouTube, 347 new blogs are published on WordPress and more than 680,000 posts are shared on Facebook. They are impressive numbers that indicate how everyday billions of data are channeled through the web and social networks. All these numbers correspond to the so-called Big Data, on which all the web giants, staring with Google and passing through Apple and Microsoft, have been competing for attention for some time now. Big Data is an actual and potential source of huge gains for all companies operating on the web, including tourism operators and small and medium-sized accommodation facilities. Today is not possible to ignore the web and the logic of Content Marketing, which now literally dominate the scene.

2.7.1- Content Marketing in the tourism market

For this strategy to work, companies need to sympathize with storytelling, the ability to communicate the brand by telling stories and thus going beyond mere product descriptions. Tourism is certainly one of the industries in which storytelling can be widely implemented.

The success of our promotion campaign is closely linked to some preliminary notions. These are three steps to be taken to get off in the right way:

1. First of all, ideas regarding the target users must be clear, i.e. the preferred audience to which marketers should direct their communications and messages, such as families, sportsmen, young couples or groups.
2. It is also important to identify the strengths, the things for which the facility is unbeatable, and which best characterize the destination, the accommodation facility or the tourist offer. Around these strengths much content will revolve.
3. Finally, to allow accommodation facilities' communication to reach addressees' eyes and ears, it's crucial to adopt the right language and style and the most suitable channels and tools.

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[23] Acronym for Search Engine Optimization.

The content is the key element of the strategy. These contents allow for a dialogue on an equal footing, consisting of relevant information and not advertising messages, thus improving persuasiveness and emotional appeal. In this scenario, Cialdini's Levers of Persuasion[24] prove to be crucial for structuring the demand of potential customers and neuromarketing interventions during the buying process.

2.7.2- Airbnb

Airbnb establishes itself as a leader in Content Marketing and shows how content is the trump card for effective communication. The US platform has realized that there are no longer 1950's consumers who were fed commercials about magic hoovers or miracle soaps, people demand quality content and want it communicated effectively and with style. They are tired of being constantly interrupted or annoyed but need communication that attracts and amazes.

Airbnb's content strategy relies heavily on the consumer's perception of feeling part of a community. Head of content strategy at Airbnb Marissa Philips has declared: "We want to inspire our guests, empower our hosts, and make sure everyone feels a sense of belonging in our community. That's a huge responsibility, but also an exciting opportunity, and in many ways, we're just getting started". Consumers feel they belong to a community when they have the opportunity to act directly and make their voice heard, so Airbnb has sought to engage its customers directly, offering them the opportunity to generate personal content that can be shared with the rest of users. User-generated content is thus transformed into effective and credible promotional products. Therefore, it seems clear that the US company does not consider its customers as consumers, but as "accomplices", having the common goal of improving the conditions of an entire community, in which individual can feel stronger and more protected.

Initially, the brand aroused feelings of mistrust as it proposed renting out houses to strangers and, at a time when the sharing economy was not yet so well implemented, it had to fight hard to achieve the fame it has now. However, not all companies succeed in implementing effective content strategies. Airbnb, on the other hand, ranks among the undisputed leaders in Content Marketing, demonstrating great skill in creating unusual, engaging and stimulating content for its users.

Some contents created by Airbnb are:

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[24] Par. 2.4.

Neighborhood guide

Airbnb has created a special section dedicated to neighborhood guides[25], within which one can find a lot of information divided by category such as "art and museums" or "parks and nature". These guides are visually striking and well organized and turn into a successful service that show the brand's interest in its customers.

This section is very intuitive for the customer, who can enjoy both advice of locals and tourists who have stayed there. Obviously, this service is only dedicated to metropolises and offers the potential traveler an experience beyond that of a simple tourist, but of a temporary citizen of the place.

Airbnb stories

The brand emphasizes its focus on belonging by collaborating with local photographers and filmmakers to tell touching stories. These stories represent the pure example of Content Marketing based on storytelling. In this service, multiple neuromarketing techniques are used, touching the emotional side of both hosts and guests, who are part of the same community.

Among these stories, some that have attracted a lot of interest in the Airbnb community are a Brooklyn-based artist couple housing on Airbnb, a South Korean couple who used Airbnb for a 24-country trip and a chronically ill New Yorker who was forced to sell his Nolita flat to avoid becoming homeless after losing his job.

Airbnb has come a long way since 2008. The evaluation that market gives it is more than 74 billion dollars[26], more than double the enterprise value of a successful and historic hotel chain like Hilton Worldwide (35 billion dollars[27]). It has completely twisted the travel and hospitality industry and it is only 14 tears since its inception.

Are business innovation and technology responsible for the colossal success of the brand? Certainly. But scholars also attribute some of the glory to the numerous neuromarketing and content creations campaigns, which have stirred emotions within the entire tourism landscape, offering users a new frontier of travel planning.

[25] https://www.contentharmony.com/content-marketing-examples/airbnb-neighborhood-guides/
[26] Yahoo Finance. (The data dates back to July 28th).
[27] Yahoo Finance. (The data dates back to July 28th).

2.7.3- Content Marketing tools

Reading the previous paragraphs, it is not difficult to observe that Content Marketing strategies that appeal to customers' emotional set-up can bring extraordinary results, especially in the medium to long-term, depending on the budget invested and the quality of the content devised. The planning of such strategy needs its own timeframe. A crucial point is the choice of tools and channels suited to the target groups and to the identified buyer personas. On the choice of the best tool will depend the content programming, the identification of the appropriate tone of voice and the language to be adopted. Obviously, the key to embarking on a potentially fruitful strategy is undoubtedly constancy: once a path is taken, it is important to manage it gradually.

The tools to be considered when choosing a content marketing strategy are:

Website and blog

The website is the gateway where a hotel or accommodation, by referring to its services, history, or rates, can be of help to internet users. On the other hand, on the blog the narrative continues and ceases to be self-referential but deals with topics related to the reality that one wants to promote. A blog's hotel, for example, can announce which are the most important events in the area or which typical products potential customers should try. To enhance the reachability of website and blog pages, it is necessary to rely on an experienced SEO copywriter who knows how to produce eye-catching texts that can improve the position as high as possible on search engines.

Social media

In a Content Marketing for tourism, the use of social networks is crucial, especially those targeting audiovisual content such as Facebook and Instagram, but in recent years Pinterest is also becoming a prime candidate.

According to data collected on a global scale by the Content Marketing Institute, 93% of content marketers use social media to disseminate content. The most used channels for content distribution are LinkedIn, Facebook and Twitter.

Facebook is 80% adopted in B2B and 90% in B2C[28]. On this social networking site, it is important to give weight to quality and not to quantity by favoring concise but effective messages. Furthermore, it is crucial to adopt integrated storytelling strategies between content and images or multimedia elements.

Twitter is also referred to as press office 2.0 and is used 80% in B2B and 69% in B2C strategies. Several tricks are possible on Twitter, such as tell a story spot and tie the tweets together via hashtags or exploit live tweeting during events to gain followers and test users' reactions.

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[28] Network Digital 360. M. Gianni. (2022).

LinkedIn is the main social network dedicated to the development of professional contacts and is 80% used for B2B strategies and 51% used for B2C campaigns. Certain skills are necessary to use such a social network effectively and to capture the attention of users. For instance, these tricks can be taken care of the graphic side of the corporate page, write a few-well edited and well-written posts or participate in discussion groups to show their qualities and skills by leveraging user-generated content.

In conclusion, Social Media Marketing and Content Marketing meet and complement each other so much that they cannot do without each other. This is why it is important to devote time and energy to strategic content planning through the constant search for the most effective keywords, the application of SEO techniques and analyzing data and listening to users.

Newsletter and email marketing

In such a strategy, especially if it is to support a company operating in the tourism industry, customer loyalty cannot be omitted.

The newsletter is an e-mail message sent periodically through specific platforms, which exploits customers contacts, or the e-mail address of people known to be interested[29]. To improve the effectiveness of this technique, it is important to build a well-profiled database, preferably subdivided by specific interests. If it is embedded in a well-defined communication strategy, the email provides excellent results and can be an asset for the accommodation facility.

There are five advantages of activating an email marketing campaign:

1. Get more hits to the site inserting direct links, directing people to the offer or package on sale.
2. Create a direct and trusting relationship with people who have chosen to receive the communications or promotions.
3. Include several topics in a single mailing: editorials, stories about events, discounts, significant episodes in company life and much more.
4. Schedule the dispatch of messages according to a precise cadence and have the possibility of remaining imprinted in customers' minds.
5. Consulting reports: any sufficiently evolved email marketing tool provides data to understand how the campaign went and what were its weak points that need to be improved.

Obviously, open rates and in-depth clicks will be higher the more the content succeeds in breaking down the reader's rational barriers and the more it succeeds in providing solutions.

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[29] LaContent. F. Julita (2021).

Influencer Marketing

Influencer Marketing is the new frontier of Content Marketing, an innovative form of advertising communication with high potential, based on word of mouth that strategically affects a brand's visibility and is capable of influencing users' choice. This marketing strategy focuses the attention on the person sponsoring rather than on the sponsored product exploiting the popularity and influence that this individual has on people.

Influencer Marketing addresses the "*Community*", i.e., the virtual group consisting of users interested in both the influencers and the topic related to them. Linking this activity to the tourism sector, the horizons offered by these strategies to accommodation facilities or resorts are almost infinite. The most scrupulous readers will have already noticed that the concept of community has already been touched upon in the context of the targeting activity adopted by Airbnb: nowadays, belonging to a group is a very powerful weapon for influencing people's choice, and it is no coincidence that it was included by Abraham Maslow in his hierarchy of needs.

Through storytelling influencers share their holidays, allowing people to feel the thrill of an authentic experience lived in a place and triggering in the audience the desire to live that experience themselves. Moreover, they make it possible to break down stereotypes about a destination that hinder its natural economic growth related to receiving tourists.

To make the narrative of the phenomenon more concrete and understandable, it is possible to refer to an example case. Thirty-nine influencers from Italy, Colombia, Jordan, Netherlands, Portugal, Russia and Ukraine gathered in Antalya, Turkey, a beautiful seaside resort overlooking the Mediterranean Sea. More than 40 million followers admired the beauty of the Titan Mardan Palace, whose architectural design pays homage to four of Istanbul's most iconic monuments, evoking the atmosphere of a sumptuous palace with a glass ceiling and monumental staircase[30].

This activity was part of a well-planned strategy and achieved excellent results because, especially in recent times, people have become even more accustomed to getting information on social media by relying on the content and stories of other users and avoiding the classic travel agencies that involve appointments and more commitment. Furthermore, an influencer's story achieves better results than classic and traditional advertising because people get a taste of what their future experience might be. In this framework, honesty also plays a key role: people know that the opinion of an influencer is totally unbiased because potential financial returns do not depend on it, which is the case with traditional travel agencies.

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[30] Stampa Finanziaria. (2021).

Chapter 3: Eye tracking for research optimization

3.1- Neuromarketing tools at the service of unconventional research

Whereas the second chapter regards the application of neuromarketing principles to the web and the new horizons of digital marketing, the third chapter will deal with the application of neuromarketing techniques to a physical store, such as supermarkets. One of the most efficient techniques for analyzing the purchasing behavior of a costumer in a store is undoubtedly the Eye tracker, which has already been described in chapter one.

Which is the most useful neuromarketing tool? It would be nice to have a precise answer to that question. As the reader has already noticed from the first chapter, each tool has its own characteristics and the usefulness of each depends on the purpose of the research and the scope of the analysis. However, eye-tracking devices have become widely used as clinical assessment tools in a variety of applied-scientific fields to measure saccadic eye movements. With the emergence of multiple static and dynamics devices, the concurrent need for algorithm development and validation is paramount. Furthermore, the Eye tracker is one of the most widely used tools on both websites and physical shop tests as it is easy to use and transport and the overall cost of research is relatively low considered the quality of the data that can be obtained from it.

Since neuromarketing studies human behavior and how the individual reacts to certain stimuli, it is possible to test people to explore which impulse causes an interesting reaction. But what is the point? Marketers need to assess what is the most effective way to ensure that investments succeed in triggering unconscious reactions in the greatest number of people. To survive in today's market, managers, advertisers or marketers must be aware of the brain processes related to customer experience, sensory perception, information processing, memory, emotions, attention, the use of cognitive biases and archetypes, rationality, and the mechanisms of interaction between knowledge and customer decision-making.

3.2- Buyer's visual perception and sensory journey

In order to understand what influences people, the first question to ask is: what do consumers look at when they walk around the shop aisles? This question was certainly asked by the Ipsos Italy team headed by Carlo Oldrini[31], who decided to inaugurate an experimental supermarket in Milan called the "Behavioral Shopper Lab", in which subjects wear Eye Tracker glasses so that they can trace the path of consumer's gaze through the different stages that make up the purchasing process.

Researchers realized that customers perceive the products on sale not as mere objects resting on a shelf, but as three-dimensional entities and such perception varies according to multiple factors such as the direction in

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[31] Vice President of Marketing at Ipsos Italy.

which one moves along the aisle or the distance from the shelf. But how does an individual orient himself in a supermarket he has never been to? Which are the elements that act as a compass for him or her? The team realized that consumers had rarely look at the markers describing the shelf category, but their gaze is drawn to the well-known brands that help them build a mental map of the store. In addition, it was understood that there are different visual stages in the customer's relationship with the shelf. Anyway, their order does not follow a precise path but can be interrupted or alternated depending on how the category is approached, whether frontally or laterally. These steps are[32]:

1. **Shelf approach**: The first phase is mostly unconscious and pre-attentive. Consumers are still a long way off but are able to recognize some key products through which category identification takes place. At the same time, they gradually move closer by moving their trolley.

2. **Understanding of shelf logic**: in the act of approaching, consumer's eye zooms in on the shelf and his or her gaze begins to target the portions of the shelf that are of most interest. At this moment, our brain is able to quickly understand how the shelf is composed: for instance, on the coffee shelf it can quickly map out where the decaffeinated coffee is and where the soluble coffee is.
   This second stage is fundamental because it optimizes the subsequent choice process eliminating certain areas considered not consistent.

3. **Analysis and choice**: in the third phase, visual behavior focuses on the previously identified areas. At this point, the personality and emotional state of the customer determines the finalization of the buying process: if he is loyal to a brand, he will tend to choose it, whereas, if his personality leads him to explore new things, he probably will tend to try a new product so that can compare it with the one he was used to. Obviously, the levers of marketing mix are also crucial at this stage, as this is when the consumer needs to be influenced the most. It is also important for the items to fall within the zoom performed by the customer: once the consumer has identified the portion of the shelf of interest, it is difficult for him to decide to change it. Simply put, companies need to push their products into the individual's consideration set, just as they do on websites.

These steps are valid if the approach is from the front. However, if the approach is from the side there are two differences:

- The timing of the approach is very different and occurs at much closer distances.
- The phase of understanding the logic of the shelf is mixed with phase of analysis and choice.

Why do these two differences exist? The main reason is to be found in the fact that if the shelf is placed sideways, it is much more difficult for the customer to observe it in its entirety and its mapping takes place partially.

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[32] https://www.ipsos.com/it-it/misurare-lefficacia-del-pack

3.3- Complementarity of attentional states

In the first chapter the concept of attention has already been introduced and how it has changed over the years, influencing the marketing and communication strategies of organizations. In order to talk about visibility, it is necessary to understand how attention works in human beings.

But hadn't it been said that attention is a scarce resource with the advent of the internet and new technologies? Sure. Individuals are undoubtedly less and less accustomed to concentrating for a long time, but at the time of purchase the situation is different. Within a supermarket, the unconscious of people tends to counteract the infinite number of goods offered with the finite number of cash available: every buyer enters a supermarket with the aim of maximizing the benefits and minimizing the cost of them. That's why the promotions of consumer products are so attractive. To achieve the goal set, it is incumbent on individuals to be vigilant in the act of choice.

Humans may be in two different attentive conditions:

1. Guidance attention: it keeps the subject alert and aware of what is happening around him. In this state the visual impulses arrive unconsciously and automatically to the brain without cognitive efforts: the proof lies in the fact that while an individual performs an action, he can think of something else.
2. Focused attention: this is the level of attention that is managed by the will. The neocortex is active and reasoning guides the senses by making conscious attention and visual behavior requires cognitive efforts.

Human beings can quickly pass from one attentional state to another according to circumstances and reason. For instance, when an individual walks down the road from his office to his home, he is probably in a state of guidance attention: his eyes recognize every element that is already known and mechanically bring it back to the subject. However, if an unexpected event occurs during the usual journey, the attentive state passes to the focused stage in a sudden way. Therefore, the focus is on the new situation and the brake or steering wheel is activated to stop the car or dodge the obstacle. From this example, it can be derived how the concept of visibility is totally linked to the attentional state. Bringing the concept back to the topic of interest, when a customer searches on a shelf for a specific product, reasoning guides his eyes. In this case, McLean would say that it is the neocortex that holds control of the brain. On the other hand, when a consumer is on an aisle and his gaze is drawn to a product with a particular packaging, persuading the reptilian brain, i.e., the part of the brain that according to McLean would not be governed by reason but by basic needs.

Research from the Princeton Neuroscience Institute observed that our attention travels between the two states at a rate of 250 milliseconds, showing that our brain has the opportunity to focus on an object or topic four times per second. Therefore, visibility is not a settling concept, but becomes a function of the attentional state.

What does this mean in practical terms? This means that an item could be noticed to be purchased and remembered to be retained in a condition of focused attention and in a condition of guidance attention it may no longer be. Logically, some products destined exclusively for impulse purchases are seriously penalized because by their nature they can only be noticed in conditions of guidance attention.

3.4- Case study: Ipsos research on the industrial confectionery category

Another topic of great interest to marketers is the composition of the shelves and how it affects sales for retailers and manufacturers. Nowadays, there are objective difficulties for European consumers who are faced with completely different shelf layouts in similar shops.

These problems stem from the absence of objective criteria determining the right arrangement of product on shelves. In order to reverse this trend, it is necessary for research centers to increase the number of studies concerning the various purchasing processes of market segments. In this respect, the US supermarkets can be considered the most innovative as more resources are invested in research[33].

Description and preparation

In supermarkets there are dozens of categories from which the customer can choose. Is this good for customers? An oversupply may result in less satisfaction during the purchase with repercussions on the retailer's sale. Faced with this doubt, Ipsos selected the category to be analyzed, industrial confectionery. This category was divided into four sections: wafers, coated pastry, filled pastry and traditional pastry.

After choosing the category, researchers decided to compare a real shelf in a supermarket located in the suburbs of Milan and an experimental shelf reproduced in the Ipsos 'Behavioral Shopper Lab'. The mission of research was to test through the Eye Tracker the difference in purchasing behavior between the two racks, reproducing one less stocked with product lines.

In the real supermarket shelf, there were 33 brands with a total of 77 products distributed in 8 corbels and a length of 4 meters. The products represented 37% of the market in terms of volume. Furthermore, the four sections were not organized according to a display logic. Turning into the shelf reproduced in the laboratory, it was equipped with 22 brands for a total of 51 products, representing 34% of the market. Fewer products allowed the researchers to adopt a shelf equipped with 6 columns of corbels while maintaining a length of 4 meters.

It is immediately noticeable that the elimination of 30% of the actual offer resulted in only a 3% reduction in market representativeness. The last step for the reorganization of the experimental shelf was the net division of the 4 sub-categories.

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[33] https://www.ipsos.com/it-it

For the experiment, 180 subjects were planned to be divided into two groups of 80 people and each group was assigned a location. Obviously, none of them knew that the research object coincided with the traditional pastry shelf. Their behavior was analyzed under four profiles:

1. Time of interaction with the shelf.
2. Visual behavior.
3. Purchasing behavior.
4. Rational statement about the shopping done.

Results and conclusions

The first incongruence was found in the interaction time profile: the subjects exposed to the experimental scenario interfaced with the reference shelf for an average of 8% less time than the other group. A rationalized scenario led consumers to spend less time in front of the shelf and to purchase more quickly, making the process more efficient. Regarding visual behavior, the experimental group had to look at fewer products. It seems obvious, but they did not have to look at products they had already seen as it was easier to visually map the composition of the shelf. Finally, in terms of money spent, the Ipsos supermarket in the examined category recorded an average of 4% more euros earned.

Manufacturers are gradually realizing that producing many product lines is not the same as offering more choice but can provoke unconscious reactions that cause consumers to buy less. This implies an optimization of the production chain and thus an economic saving that can be allocated to research, primary factor of learning organizations. From this case study it becomes clear how important it is to invest in new market analysis technologies that are based on Neuromarketing concepts. By carrying out the right studies, it is possible to obtain qualitatively and quantitatively interesting data that can guide organizations to conduct more targeted operations.

3.5- Case study: Ipsos inquiry on best shelf placements in terms of visibility

What is meant by display? Display means what consumers see when they come face to face with a shelf. What, on the other hand, is a planogram? A planogram is a schematic tabular drawing with detailed diagrams of the positioning of goods, the number of repetitions of the same packages (facing), their price and next to which other products (adjacencies). Planograms are prepared by a software that is pre-set with all the physical data along with the rotation data, i.e., sales measured in volume per unit of time[34].

The rules of visual merchandising, i.e., the indications that marketers set on the software which, as mentioned above, may vary from one supermarket chain to another, but there are usually four:

1. Subcategories are usually arranged vertically in such a way as to facilitate the customer.

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[34] "Gli occhi del consumatore: le scelte di acquisto analizzate con occhiali eye-tracking". C. Oldrini. (2019)

2. Brands are arranged horizontally.
3. Private labels are placed at eye level as they are supposed to be seen first.
4. Spaces allocated to a product are directly proportional to its rotation speed.

Description and preparation

The Ipsos Italy team wanted to verify that the third rule was true. Is it certain that the first products to be seen are those positioned at eye level? For this experiment, two groups of consumers were asked to wear the Eye Tracker and the chosen category was soft drink. The first group was interfaced with a shelf exactly congruent with one found in a large supermarket in Milan, while the second group was subjected to the display of a highly modified experimental shelf: the leading brands belonging to the Coca Cola corporate group were positioned in the worst places, i.e., to the side and at the bottom.

Results and conclusions

The visual data that the team expected to detect was an eye-level visual concentration in the first seconds of contact with the shelf for both groups: this result would confirm the thesis that the best place was at eye-level.

In contrast, the data revealed that in the first five seconds for both groups, the visual concentration detected by the tool was on the lowest corbels. Carlo Oldrini and his team were astonished and, after verifying the consistency and reliability by means of video footage from the cameras in the laboratory, found that the visual concentration of the first five seconds varied according to category. There are categories that confirm the third rule of visual merchandising and others such as soft drinks where this law does not seem to be applied.

The final explanation for the phenomenon that Ipsos concluded can be traced back to the format of the container: it was found that the categories involving bottles and flacons has a visual concentration that the started from the bottom. The same phenomenon is found for another category such as floor detergents where the heavier packages are generally positioned lower.

Obviously, the visual analysis does not clarify totally every behavior assumed by consumers. The position of the product on shelves certainly influences the choices and it can actually be confirmed, through other studies, that the central positions guarantee the best rotations, but the explanation consists not in visibility but in the accessibility and habit of finding the brands in usual positions.

Conclusions

The technological progress that has distinguished global society has changed the traditional paradigms that governed consumers' purchasing paths. Today, the consumer has developed new barriers that have rendered traditional marketing technics ineffective.

The new research tools, which neuromarketing uses, make it possible to capture consumers' neurological responses. In this sense, the unconsciousness of the individual allows for qualitatively more interesting data, upon which companies can structure more effective and optimized strategies. Such strategies aim to target the most sensitive portion of the brain: according to Mc Lean, the Reptilian brain is responsible for the individual's primary needs, and for that reason coincides with the least rational part.

Nowadays, companies need organizational charts that are less hierarchical and better suited to meet the new challenges thrown up by the market. Technological advancement has caused greater uncertainty and competitiveness, and only organizations with an innovation-related approach can exploit the competitive advantage of using these new tools.

The multichannel adaptability of Eye Tracking is an example of how such methodologies succeed in maximizing conversions and sales.

The application of neuromarketing principles demonstrates the ability of these new techniques to revolutionize the dialogue with the consumer through a new way of selling a product service. The choice to focus on the tourism sector is not accidental. This sector has undergone radical changes from the point of view of the purchasing process; the consumer is constantly seeking sensory experiences. Nowadays, it is important to invest the necessary resources not only in the customer experience in physical terms, choosing the most suitable staff or improving the quality of the furniture, but also in the virtual experience.

Content Marketing and Storytelling are the most used and effective tools to convey the right emotions to the consumer. As detailed in Chapter 3, Airbnb is a successful example of the appropriate use of such tools and the success of Airbnb in the market confirm this.

In addition to being particularly effective in digital strategies, neuromarketing can represent a fundamental resource for a detailed analysis of the buying process within a physical store. The competition is so high that managers, advertisers or marketers must be aware of the brain processes related to customer experience and even in this field Eye Tracking represents a very powerful and usable tool.

In order to understand what influences the consumer when enters a store, Ipsos Italia inaugurated the "Behavioral Shopper Lab" in which, through a use of Eye Tracking, it was possible to match the consumer's gaze to the different stages of the buying process. The result of this case study is very interesting since it confirms the importance to invest in new market analysis technologies that are based on Neuromarketing techniques. By carrying out the right studies and using the right instruments, it is possible to obtain

qualitatively and quantitatively interesting data that can guide the marketer to conduct more targeted and profitable operations.

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