

Doctoral Thesis

**Sensory stimuli to influence customer
engagement in digital contexts**



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DE SALAMANCA**

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Los doctores Don Óscar González Benito y Don Álvaro Garrido Morgado, como directores de la Tesis Doctoral “Sensory stimuli to influence customer engagement in digital contexts” realizada por Doña Evelyn Sophía Valenzuela Gálvez en el Departamento de Administración y Economía de la Empresa de la Universidad de Salamanca, autorizan su presentación a trámite dado que reúne las condiciones necesarias para su defensa.

Y para que así conste, a los efectos oportunos, se firma la presente en Salamanca a 6 de Julio de 2022.

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Abstract

Sensory marketing is an opportunity to influence the perception, judgment and behavior of consumers and maximize the profitability of the product. Different brands use stimuli in digital contexts to boost customer engagement. For example, emojis, gifs, stickers, and images that are visually appealing. As auditory stimuli, there are voices, music, playlist, etc. and the rest of the senses, they can integrate digital interfaces that help them better experience the products, such as screens, zoom, or simpler elements such as images or sensory descriptions. This thesis studies sensory stimuli in digital contexts and the influence they have on customer engagement. Moderating variables are integrated into the analysis to better understand how these stimuli influence customers.

The results obtained through the different experiments carried out in digital contexts with a sample of consumers and students suggest that the presence of sensory stimuli increases customer engagement in digital contexts and there are different variables that moderate their effectiveness. In the case of visual stimuli (emojis), the type and repetition moderate the relationship, for auditory stimuli, the type of product and the involvement are important variables to consider, while for sensory words related to touch, the consumer's need-for-touch is relevant to understanding how sensory words influence customer response.

This thesis contributes to the previous sensory marketing literature by integrating the five senses in digital marketing and three, difficult to replicate on the internet (smell, touch, and taste), in addition to integrating less studied sensory stimuli (for example, emojis, sounds associated with the product, voice-over and sensory words) and integrating less explored digital channels such as emails and blogs. Other contributions are the inclusion of moderating variables when predicting the effects of sensory stimuli, as well as a consistent and complete metric of customer engagement. Finally, the results obtained in this thesis have important practical implications for marketing professionals specialized in digital contexts, brands, software, social networks, websites, and search engines.

Resumen

El marketing sensorial es una oportunidad para influir en la percepción, juicio y comportamiento de los consumidores y maximizar la rentabilidad del producto. Diferentes marcas utilizan estímulos en contextos digitales para impulsar el compromiso del consumidor. Por ejemplo, emojis, *gifs*, *stickers* e imágenes que son atractivos visuales. Como estímulos auditivos hay voces, música, *playlist*, etc. y para el resto de sentidos pueden integrar interfaces digitales que los ayuden a experimentar mejor los productos, como pueden ser pantallas, zoom o elementos más simples como imágenes o descripciones sensoriales. Esta tesis estudia los estímulos sensoriales en contextos digitales y la influencia que tienen en el compromiso del consumidor. Se integran al análisis variables moderadoras que ayudan a comprender mejor cómo influyen estos estímulos en el consumidor.

Los resultados obtenidos a través de los diferentes experimentos realizados en contextos digitales con muestra de consumidores y estudiantes, sugieren que la presencia de estímulos sensoriales incrementa el compromiso del consumidor en contextos digitales y hay diferentes variables que moderan la relación. En el caso de los estímulos visuales (emojis), el tipo y la repetición moderan la relación, para los estímulos auditivos, el tipo de producto y la implicación son variables importantes a considerar, mientras que para las palabras sensoriales relacionadas con el tacto, la necesidad de tocar del consumidor es relevante para entender cómo influyen las palabras sensoriales en la respuesta de los consumidores.

Esta tesis contribuye a la literatura previa del marketing sensorial al integrar los cinco sentidos en marketing digital y tres, difíciles de replicar en internet (olfato, tacto y gusto), además de integrar estímulos sensoriales menos estudiados (por ejemplo, emojis, sonidos asociados al producto, voz en *off* y palabras sensoriales) e integrando canales digitales menos explorados, como correos electrónicos y blogs. Otras aportaciones son la inclusión de variables moderadoras a la hora de predecir los efectos de los estímulos sensoriales, así como una métrica congruente y completa del compromiso del cliente. Finalmente, los resultados obtenidos en esta tesis tienen importantes implicaciones prácticas para los profesionales de marketing especializados en contextos digitales, marcas, softwares, redes sociales, websites y motores de búsqueda.

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Chapter 1. Introduction to sensory marketing

Sensory stimuli to influence customer engagement in digital contexts

Sensory marketing is a powerful tactic that targets at least one of the five senses to elicit meaningful responses (Sarathy, 2020). The brand impact improves 30% when more than one sense is engaged and marketing strategies that engages all the senses boost food and drink sales (Cooper, 2013). For example, the smell of a Starbucks store evokes a memorable and consistent aroma and before COVID-19, more than half of shoppers visit a brick-and-mortar store to touch or see a product firsthand that they may end up buying online (Sarathy, 2020). How can brands evoke these same senses on their e-commerce channel? The answer is to mimic in-store sensory experiences to fully engage customers. For example, to sight sense there are a wide of highly visual cues online, especially important for online retailers (i.e., gif, emojis, images, videos). For the sense of hearing, there are playlist, voice-over, music, auto-play soundtrack when people visit the website, etc. The rest of the senses (smell, taste, touch) are more complicated to replicate, but brands use descriptive words and images that simulate the smell, touch, or flavor of the product (Raeburn, 2020; Sarathy, 2020).

McDonald's and Pepsi use emojis in digital marketing (Danesi, 2016), Visa use suite of digital elements — including a combination of animation, sound, and haptic vibration when customers complete a transaction and NEST describes each scent type, keynotes, and mood. These details make it easy for consumers imagine the sense (Sarathy, 2020).

1.1. Main Concepts

Sensory marketing is marketing that engages consumers' senses and affects their perception, judgment, and behavior (Krishna, 2012). In this research, we define a stimulus as any sensory input (e.g., product attributes such as aroma, flavor, texture, or sensory-related cues such as visuals, sounds, and voice used by brands) that influence customer engagement.

It is the increased role of social media that has created a need for the concept of customer engagement (Bielski, 2008), and practitioners and academicians alike aim at comprehending how companies might facilitate customer engagement in an increasingly interactive environment. As a result, marketers are making significant investments in providing customers with seamless digital experiences and immediate customized solutions to engage them with their brands (Rasool *et al.*, 2020).

Customer engagement is defined as a psychological state that occurs because of interactive and co-creative experiences of clients or consumers with specific brands, actors, objects, or events (Hollebeek *et al.*, 2014) or as pointed out by the Marketing Science Institute (MSI), that customer engagement is a manifestation of client behavior toward the brand or the company “beyond the purchase” (MSI, 2013). Consumer engagement is related to a particular behavior, and it is a multidimensional construct (Kuvykaite and Taruté, 2015). This research used behavioral and non-behavioral dimensions. The behavioral dimension is the effort and energy that the consumer makes (like, share, open, read or click) to interact with an object of engagement (i.e., brand email, post on social media). The non-behavioral form is through responses related to sensory experiences (Brakus *et al.*, 2009), approach-avoidance (Mehrabian and Russel, 1974) and emotional responses (Vander *et al.*, 2020).

The behavioral dimensions are widely used in digital marketing because it provides a measure of a consumer interest, which is relevant, and provides a measure of the actual "exposure" to an advertisement, email, or post, which is difficult for most advertising channels (Sahni *et al.*, 2018). Engagement is measured by likes, shares, saves, clicks or comments (Davis *et al.*, 2019; McShane *et al.*, 2021), although not all of them denote the same level of engagement (Calder *et al.*, 2009). For example, Muntinga *et al.*, (2011) presented a typology that classifies the interaction:

- The lowest content consumption level (e.g., see videos and images or read product reviews)
- Moderate level (e.g., taking part in the conversations or commenting on videos/images)
- The highest level, which refers to creating and sharing content

We integrated non-behavioral dimensions because it is important to integrate the different dimensions that broadly emerged from our literature review. Those responses are defined as follows: Sensory experience is this dimension that refers to whether the stimuli produced sensations. That is, if people perceived something through five senses, e.g., an intensification of smell, taste, sight, or touch. Approach-avoidance response is the positive or negative responses to the digital environment provoked by stimuli (sound, color, design, etc.) such as the decision to follow, tap on an image, like, share a link or return to the online

store or website and emotional response is when a listener perceives or recognizes expressed emotions by stimuli. It is about how customer feel in a short-term (e.g., stimulated, excited).

Customer engagement is relevant because increases the reach of messages, helps identify potential customers, improves customer relationships, and contributes to the generation of favorable attitudes and beliefs towards the brand (Calder *et al.*, 2009; Sahni *et al.*, 2018). Moreover, it allows customers to create a link with the brand and generates long-term brand capital for the company, improves reputation, which positively influences customer-based brand value, and can influence in revenue, sales, and profitability (Lee *et al.*, 2018; Sahni *et al.*, 2018; Vivek *et al.*, 2012). In brief, customer engagement is a form of social capital that enables brands to gain competitive advantages (Kemp *et al.*, 2021; Kim *et al.*, 2021).

Previous literature about sensory marketing

In a traditional retail environment, the atmosphere created especially by sensory environmental cues (color, lighting, music, aroma) influences the behavior of customers through their emotional reactions (Baker *et al.*, 1992) and spread a pleasant smell, color or music can contribute to the positive evaluation of the store and influence the time and money that consumers spend there (Chebat and Michon, 2003; Sherman *et al.*, 1997). The same is likely to be true for online environments (Liu *et al.*, 2018).

The impact of sensory marketing is not limited in the online environment, but it does not necessarily cross the same channels as those used in the physical environment (Petit *et al.*, 2019). It is likely that when consumers experience stimuli in the real world, the brain captures perceptual, motor, and introspective states related to the various senses and integrates them into multisensory representations that are stored in memory (Barsalou, 2008). Later, by having product-related experiences on websites, consumers can define sensory expectations (Petit *et al.*, 2019).

Sounds, tactile technology applied in virtual environments (Hultén, 2011), information that transmits sensory perceptions (Krishna and Schwarz, 2014) and conscious design in web environments (Petit *et al.*, 2019), are sensory strategies to offer a multisensory brand experience. In this way the brand can become more individual and personal for the

customer (Hultén, 2011), which allows to communicate personalized messages that can influence the processing of messages and impact on engagement (Willoughby and Liu, 2018).

Much study has been done on sensory marketing, but additional research is still needed on many aspects (Krishna, 2012), mainly in digital marketing, where there are still few contributions on sensory stimuli (Petit *et al.*, 2019). Although the five human senses are important in creating brand experiences (Hultén, 2011), there is still not enough research on each of the senses (smell, hearing, taste, haptic, vision) and their influence on customer behavior (Krishna, 2012). There is still little research on different types of visual stimuli and sounds (Petit *et al.*, 2019), olfactory and gustatory stimuli or the substitute elements to touch (Peck and Childers, 2003).

1.2. Objectives and contributions

This thesis improves the theoretical and managerial implications about sensory stimuli in digital marketing and their influence on customer engagement. We want to answer the call for papers that highlight a lack of empirical and experimental studies about sensory stimuli in digital marketing and how they influence customer engagement (Krishna, 2012; Petit *et al.*, 2019). Additional empirical research is needed to identify drivers of customer engagement online (Kaura *et al.*, 2020) and to optimize their use in different communication channels (Wang, 2021), such as email marketing, blogs, and websites. The current research addresses these relevant issues. Therefore, in addition to analyzing the effect of sensory stimuli on customer engagement, this study investigates the role of moderating variables.

We conduct a study for the five senses because there is still not enough research on each of the senses (smell, hearing, taste, haptic, vision) and their influence on customer behavior (Krishna, 2012). We analyze de emojis as visual stimuli to influence customer engagement in email marketing. No studies, to the best of the authors' knowledge, analyze the effects of emojis in email marketing as visual stimuli, even though that channel reaches about three times more customers on average than Facebook and Twitter combined (Lee, 2016) and email campaigns also are efficient, inexpensive, and effective (Lee, 2016; Tran and Strutton, 2020). The study addresses relevant questions. For example, can emojis increase customer engagement in a channel that is, a priori less prone to interact, such as

email? If so, what features make emojis effective? Thus, the study investigates the influence of the type of emoji, repetition, and position as moderating variables (Chapter 2). For the sense of hearing, there is little research on other types of sounds different to the music (e.g., product-associated with a product, voice, sound effects, noise, etc.) (Chattopadhyay *et al.*, 2003). For this reason, we study whether the presence of sound stimuli (product-associated with a product and voice-over) influences customer engagement and whether product type and consumer involvement moderate the effect of sound on customer engagement (Chapter 3).

Online brands lack the ability to create a physical experience, not every sense can be stimulated. However, customers evaluate products through textual and visual stimuli (design elements) in websites (Bleier *et al.*, 2019). Consumers do not necessarily need to touch or smell the products to obtain the relevant sensory information, they can also imagine the expected sensory properties of the products based on their previous experiences with the support of basic digital interfaces (e.g., screen, mouse, and headphones) or with a written description of the sensory properties (Petit *et al.*, 2019). Thus, we investigate if sensory stimuli such as words associated with smell, touch, and taste increase customer engagement (Chapter 4) and we add how the need-for-touch (NFT), moderates the relationship of the presence of haptic sensory words in customer engagement (Chapter 5).

We assess the effect of sensory stimuli on different dimensions of the customer engagement and different techniques (experimental study with actual customers, raw data, and questionnaires) and different digital channels, not only social networks. In brief, through different experimental studies, the objectives of the thesis are: i) study the influence of the presence of sensory stimuli (visual, auditory, olfactory, haptic, and gustatory) on customer engagement, ii) and analyze different variables that moderate this relation.

In turn, this research makes several contributions. The detailed findings can help brands and marketers develop effective marketing strategies that should enhance customer engagement, customer loyalty and even brand performance.

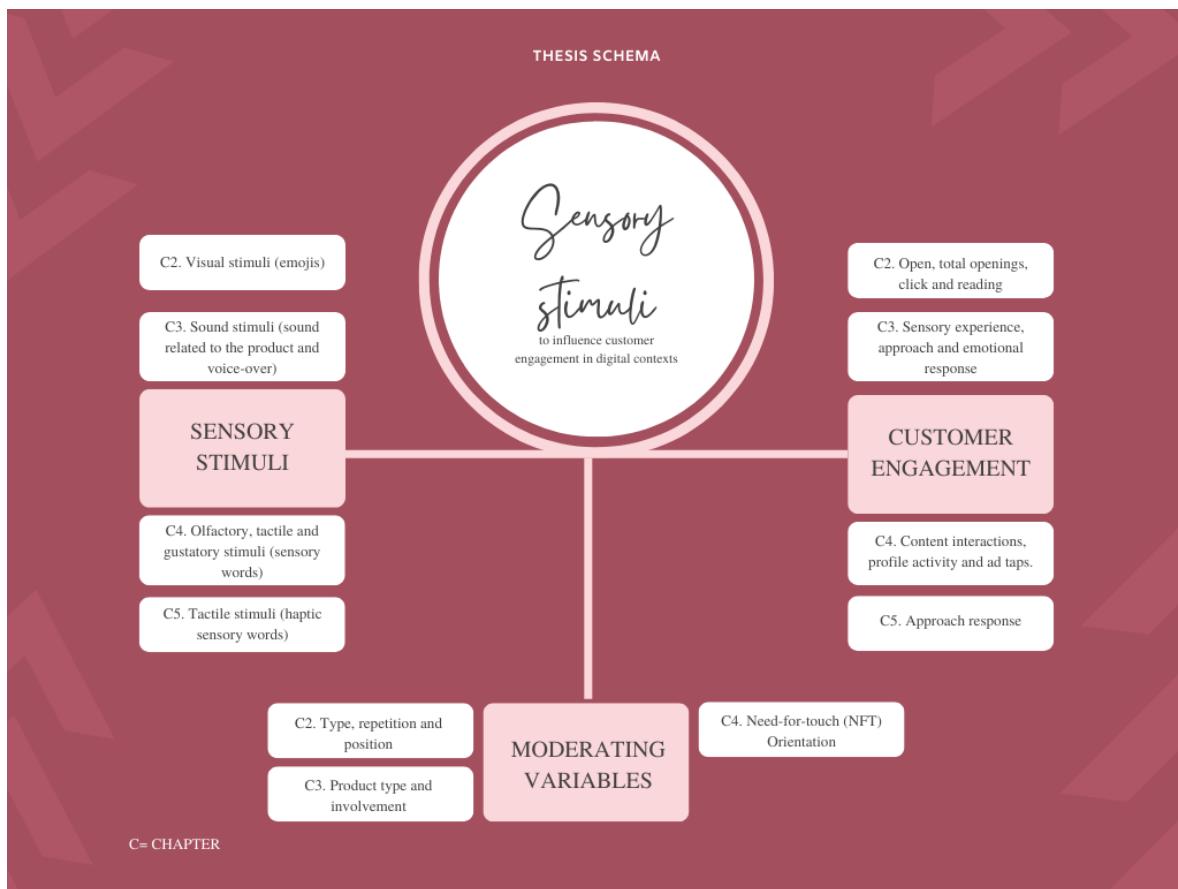
1.3. Structure of the thesis

The present thesis is structured as follows:

Chapter 2 evaluates if and how emojis might boost customer engagement in email marketing campaigns. The research aims to analyze emojis' effects and investigates how certain features, such as the type of emoji or the way of emojis' presentation (repetition and position), moderate their effectiveness. Chapter 3 study whether the presence of sound stimuli influences customer engagement (sensory experience, approach-avoidance response, and emotional response) in Instagram and blogs. This chapter evaluates whether product type and consumer involvement, moderate the effect of sound on customer engagement. We created an experimental scenario on Instagram and blogs, and we collected the data with a questionnaire.

Chapter 4 analyzes if sensory stimuli such as words associated with smell, touch, and taste enhance customer engagement with post and ads of different brands in Instagram. Chapter 5 addresses haptic sensory words and their influence on customer engagement, also how certain features, such as customer need-for-touch (NFT) moderate their effectiveness, through an experimental scenario and questionnaire. Finally, Chapter 6 discusses the conclusions and implications for theory and practice.

Figure 1.1. Thesis schema



Source: prepared by authors

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Sensory stimuli to influence customer engagement in digital contexts

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Chapter 2. Boost your email marketing campaign! Emojis as visual stimuli to influence customer engagement

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Sensory stimuli to influence customer engagement in digital contexts

2.1. Introduction

Interactive marketing aims to generate emotions and engagement online by encouraging consumers to interact with the brand (Malthouse and Hofacker, 2010), and brands have a wide variety of interactive marketing tools at their disposal to enhance interactions with customers. For example, previous studies identify distinct effects of various tools, such as emojis, especially in social networks like Twitter (Casado-Molina *et al.*, 2019; Davis *et al.*, 2019; McShane *et al.*, 2021), other social media or online ads (Hewage *et al.*, 2020; Lee *et al.*, 2018). No studies, to the best of the authors' knowledge, analyze the effects of emojis in email marketing campaigns, even though that channel reaches about three times more customers on average than Facebook and Twitter combined (Lee, 2016). By emailing consumers, brands can create customized content (e.g., playlists, tips, promotions, and reviews) that is easy to share, so this approach should evoke interactive, engaged attitudes among customers. Email campaigns also are efficient, inexpensive, and effective (Lee, 2016; Tran and Strutton, 2020). Thus, additional empirical research is needed to identify drivers of customer engagement online (Kaura *et al.*, 2020) and to optimize their use in different communication channels (Wang, 2021), such as email marketing.

Accordingly, the current research addresses several relevant questions in this research domain. For example, can emojis increase customer engagement in a channel that is a priori less prone to interaction, such as email? If so, what features make emojis effective? Most prior research pertains to whether the presence or absence of emojis determines customer engagement, without distinguishing different types or their presentation format. Therefore, in addition to analyzing the effect of emojis on customer engagement with email marketing campaigns, this study investigates the influence of the type of emoji, its repetition, and its position.

In turn, this research makes several contributions. The detailed findings can help brands and marketers develop effective interactive marketing strategies that should enhance customer engagement, customer loyalty and even brand performance.

2.2. Literature review and hypotheses

2.2.1. Interactive marketing and customer engagement

Brands' uses of interactive marketing are shifting, away from product- and company-based marketing to experience- and interaction-focused marketing, as a method to generate more active customer connection, engagement, participation, and interactions. Some customers even might become promoters or content generators for the brand (Wang, 2021). Such uses are global and widespread, which is encouraged by a current culture of customer participation and advanced technologies that provide new possibilities for creating value and emotional customer experiences through chats, blogs, videos, music or emojis (Wang, 2021). When these features evoke customer engagement, it implies that customers enter "a psychological state that occurs as a result of interactive and co-creative experiences of clients or consumers with specific brands, actors, objects or events" (Hollebeek *et al.*, 2014, p. 149). Thus, customer engagement is a multi-dimensional construct, though the current research centers on the behavioral dimension, which pertains to the customers' effort to interact (e.g., like, share, open and click) with the engagement object (e.g., brand, post, and email). For example, Vander Schee *et al.*, (2020), integrate metrics such as following, reading, or commenting to measure the behavioral dimension of the engagement.

Customer engagement, in turn, increases message reach, helps the brand identify potential customers, improves customer relationships, and contributes to favorable attitudes and beliefs toward the brand that can enhance the value of branded products and services (Sahni *et al.*, 2018). If customers develop a bond with the brand, it even can lead to long-term brand capital and customer-based brand equity, which then may increase brand revenue, sales, profitability, and marketing return of investment (Lee *et al.*, 2018; Vander Schee *et al.*, 2020). In brief, customer engagement is a form of social capital that enables brands to gain competitive advantages (García-de-Frutos and Estrella-Ramón, 2021; Gligor and Bozkurt, 2021; Kemp *et al.*, 2021; Kim *et al.*, 2021).

Engagement depends on both adaptation and agility in social media settings (Gligor and Bozkurt, 2021). To elaborate on these findings, empirical research needs to identify the drivers of customer engagement online (Kaura *et al.*, 2020). Although some experts suggest email is a passé e-marketing communication mode, customers still express some positive

perceptions, especially when email campaigns offer customization, interactivity, and relevant information (Tran and Strutton, 2020). Therefore, a key challenge for marketers is to develop attractive emails that enable them to leverage advanced technological capabilities, such as to embed customized GIFs (Graphics Interchange Format), videos, playlists or emojis. Because text-based computer-mediated communication, such as email, lacks innate sensory information (Luangrath *et al.*, 2017) or conventional forms of visual sensory expression, visual stimuli such as emojis might increase their richness (Kaye *et al.*, 2017; Luangrath *et al.*, 2017; Petit *et al.*, 2019). Such appeals then could increase open and click rates, enhance customers' receptiveness to messages and encourage users to establish online relationships with the brand (Tran and Strutton, 2020; Wang, 2021).

2.2.2. Emojis, engagement and the theory of visual rhetoric

Emojis are small digital icons, first introduced into instant messaging and emails (Huang *et al.*, 2008), that function as rhetorical devices (Ge and Gretzel, 2018). In the context of rhetorical theory, “an interpretive theory that frames a message as an interested party’s attempt to influence an audience” (Scott, 1994, p. 252). Using rhetoric increases the ability to gain an audience’s attention and cooperation; in marketing contexts, it can generate positive customer responses (e.g., likes, shares, open and click rates) (Delbaere *et al.*, 2011). Esthetic value is another important driver of consumer engagement, especially in social media (Aljukhadar *et al.*, 2020). Thus, emojis increase customer engagement (Bai *et al.*, 2019; Casado- Molina *et al.*, 2019; Das *et al.*, 2019; Davis *et al.*, 2019; Hewage *et al.*, 2020; Kim *et al.*, 2021; McShane *et al.*, 2021), because they are rhetorical (Ge and Gretzel, 2018) and have an esthetic value (Aljukhadar *et al.*, 2020).

Accordingly, brands strategically use symbolic language such as videos, music (Wang, 2021) and emojis in their efforts to communicate through digital channels such as social media and email (Casado-Molina *et al.*, 2019) because these visual stimuli have strong capacity to attract people’s vision and attention (Kaye *et al.*, 2017; Petit *et al.*, 2019), especially people with low motivation or ability to process a textual message (Petty and Cacioppo, 1986). As rich visual representations, emojis usually get identified by the right side of people’s brains as a part of image-based language (Luangrath *et al.*, 2017) and then processed through a peripheral route that simplifies decision-making, in line with the

elaboration likelihood model (ELM) (Petty and Cacioppo, 1986). In addition to shortening the assessment process by generating emotions (Arya *et al.*, 2018), emojis communicate sensory information (Casado- Molina *et al.*, 2019). Therefore, we hypothesize as follows:

H1. The presence of emojis in emails increases customer engagement.

2.2.3. The type of emojis and customer engagement

Emojis can represent facial expressions, emotions/feelings, abstract concepts, animals, plants, activities, gestures, body parts and objects (Rodrigues *et al.*, 2018). They can even trigger different emotions for the readers depending on the context, which makes their classification difficult in any of the several grouping (Wu *et al.*, 2022). The most common sorting distinguishes into facial and non-facial forms, such that the former comprises emojis that depict expressions like smiling or crying (😊) (Walther and D'Addario, 2001), whereas the latter group includes pictographs or representations of real elements (Riordan, 2017), like a car (🚗).

Facial emojis tend to appear in digital communications and marketing campaigns pertaining to human traits or expressions (Hewage *et al.*, 2020); also, facial emojis with different emotional intensities can be effectively used in social media ads and influence purchase intentions (Huang *et al.*, 2021). Nevertheless, non-facial emojis appear more frequently to represent specific products, such as clothes, books, toys, food (fries, taco, hamburger), games or office items (Rodrigues *et al.*, 2018). Because they represent key elements associated with a brand (Petit *et al.*, 2019), non-facial emojis might disambiguate the marketing messages and allow for more flexible communication than is possible with facial emojis, which represent deliberate rather than spontaneous expressions of emotion. When the emoji directly represents a product or service linked to the brand, it also relates directly to the text and context of the marketing communication. In this case, emojis produce “visual intrigue” (McShane *et al.*, 2021), together with a perception of personalization. The theory of visual rhetoric (Scott, 1994) emphasizes that when a visual element belongs to the text message, the resulting sense of personalization influences customer engagement (Sahni *et al.*, 2018; Scott, 1994; Willoughby and Liu, 2018). This is similar when emojis accompany the content of words because they can enhance the perceived usefulness of text messages

(Wu *et al.*, 2022). Non-facial emojis also may increase audiences' confidence in their interpretation of the message and thus their sense of how to reply or interact (Riordan, 2017).

Similar to adding the recipients' names to the subject lines of emails, non-facial emojis related to the text and context of the message provide a brand personification strategy that should increase customer engagement (Sahni *et al.*, 2018). Thus, non-facial emojis, by signaling brand personalization, might facilitate information processing and influence customer engagement.

H2. The type of emoji moderates the impact of emojis on customer engagement, such that non-facial emojis have a stronger effect than facial emojis.

2.2.4. Repetition of emojis and customer engagement

Emojis in sequence often feature repetitions of the same emoji or else are grouped with others with a common semantic theme. For example, repeated smiley faces emphasize joy and repeated foods convey vast magnitudes of food. Customers like and share more tweets (engagement) that contain one emoji, and the effect increases in strength with greater numbers of emojis (McShane *et al.*, 2021), perhaps, because the messages are attractive and easier to read (Davis *et al.*, 2019). In detail, messages with three emojis increase attention (Willoughby and Liu, 2018). However, the effects of visual stimuli might gradually decrease, such that even if three emojis signal a stronger positive meaning than one emoji, the increase is not a tripling (Moussa, 2019), because the multiple signals expressing the same information become redundant rather than additive (Riordan, 2017).

According to the theory of visual rhetoric, emojis also attract people's attention, which creates the possibility of influencing their decisions (Ge and Gretzel, 2018; Scott, 1994). More visual cues should be more likely to capture attention; especially, if customers are generally inattentive or have low motivation, emojis as a visual strategy may attract their attention evoke peripheral processing and thus help them make decisions more easily (Petty and Cacioppo, 1986). Formally, we hypothesize as follows:

H3. Repetition of emojis moderates the impact of emojis on customer engagement, such that increased repetition of emojis has a stronger effect.

2.2.5. Positioning of emoji and customer engagement

The interactive influence of an emoji and text depends on whether the emoji appears before (to the left of) or after (to the right of) the message (Luangrath *et al.*, 2017; Provine *et al.*, 2007). Emojis before (to the left) the text generates more curiosity because the text has not provided any specific meaning yet (Provine *et al.*, 2007). If emojis follow the text (after or to the right), they may appear redundant because the text has already established a meaning (McShane *et al.*, 2021). Notably, these predictions refer to languages that use a Roman alphabet and reading habits from left to right. In email communications, for example, emojis to the right in the subject line might be irrelevant or even not visible on the recipient's screen. Emojis before (to the left) the text, as long as they are related to the message, can communicate effectively (McShane *et al.*, 2021) and influence customer engagement.

In addition, advertising studies acknowledge the benefits of positioning objects to the left of text, figures, or images (Chae and Hoegg, 2013). People memorize and repeat the route taken during the first reading (Barreto, 2013) and use the same eye movement to read subsequent text or images (Chae and Hoegg, 2013). Therefore, customers' attention to objects on the left is stronger due to their learned path. As visual rhetorical elements that persuade customers (Ge and Gretzel, 2018; Petty and Cacioppo, 1986; Scott, 1994), when placed to the left, emojis should attract more attention and prompt more customer engagement too.

H4. The position of emojis moderates the impact of emojis on customer engagement, such that emojis on the left have a stronger effect than those on the right.

2.3. Methodology

2.3.1. Research context

Studies involve a real brand: a marketing consultant who collaborated on this research suggested suitable branding options, which led to the choice of a car brand and a marketing agency, reflecting disparate contexts and audiences. This fact is important because previous research indicates that context and target can moderate customer engagement levels (Arya *et al.*, 2018). For example, young people frequently use emojis to communicate (Walther and D'Addario, 2001), so the presence of emojis in marketing of consumer products might

enhance the attractiveness of the messages (Bai *et al.*, 2019). However, in a professional context, the use of emojis might appear inappropriate or less effective (Danesi, 2016). Studies also involve real message content: the content of each message was determined by the brands, according to their communication strategy.

2.3.2. Data collection procedure

Participants in each study were randomly assigned to treatments. All participants had previously agreed to have their information collected in the databases of the brands that collaborated on this research; that is, they represented active customers or leads who had signed up to receive commercial, promotional, and informative content. They lived in the USA, Latin America and Spain. Both brands agreed to divide their databases, such that approximately half received messages with emojis, and half received messages without them. Then, the groups who received emojis were divided equally across the rest of treatments. The 28,862 total participants did not know they were being subjected to the experimental manipulation and did not receive any sort of compensation.

The data collection relied on assistance from Hubspot (a marketing and sale platform) to send scheduled emails at the same time between January and April 2020. A week after sending the emails, the service collected identifiers of each participant (email address) and her/his interactions with the email communication.

2.3.3. Data analysis procedure

Measures. The dependent variable is customer engagement. The measure includes several metrics, such as opening and total openings for the four studies, clicks (Study 1 and 2) and reading (Study 3 and 4). The independent variables are emojis and their type (Study 1, 2, 3 and 4), repetition and position (Study 3 and 4). Table 2.1 provides a detailed description of measurement for all these variables.

Table 2.1. Measures

Dependent Variable	
Opening	=1 if users opened the mail and 0 otherwise. It measures unique openings, or when the user first opened the email. For example, Anne receives the mail and opens it. Emma receives it and does not open it. For Anne, the opening variable equals 1, and for Emma, it is 0. If Anne opens the mail again, it does not change the binary variable but gets counted in the total number of openings.
Customer engagement	Total openings The number of times recipients opened the email, including multiple openings from the same recipient. If John receives the mail, opens it, and hours later reopens it, the total number of openings is 2.
Click	=1 for recipients who click on the CTA in the email and 0 otherwise.
Reading	=1 for contacts who opened the email and view (read) it for more than 8 seconds and 0 otherwise.
Independent Variables	
Emoji vs. no emoji	= 1 contains emoji, 0 otherwise
Type of emoji	= 1 contains non-facial emoji, 0 otherwise
Repetition of emojis	=1 if three emoji repeated in subject and text instead of just one, 0 otherwise
Position	= 1 if on the left, 0 otherwise

2.3.4. Experimental studies design

Table 2.2 summarizes the main information about the four studies used to test the hypotheses.

Table 2.2. Summary of studies

Code	Description	Manipulation	Dependent Variables	Independent Variables
1	Car brand			
2	Digital marketing agency	Subject and call to action	Engagement (open, total openings, click)	Emoji vs. no emoji, type of emoji
3	Car brand			
4	Digital marketing agency	Subject and text	Engagement (open, total openings, reading)	Emoji vs. no emoji, type of emoji, number of emojis, position

2.3.5. Factorial design experiments

The factorial design for study 1 and 2 were 2 (presence – with emoji and no emoji) x 2 (type of emoji – non-facial and facial emoji). The study 3 and 4 were a 2 (presence – with emoji and no emoji) x 2 (type of emoji – non-facial and facial emoji) x 2 (repetition – 3 emojis and 1 emoji) x 2 (position – left and right) fractional factorial design, since researchers only performs a selected subset or "fraction" of the included experimental runs in the full factorial design (Gunst and Mason, 2009). The fractional factorial design is the most appropriate to study the effect of emoji presence and its interaction with each of the other three variables (type of emoji, repetition, and position), in line with the proposed hypotheses. Thus, H1 includes one-way or direct effect analysis while hypotheses H2 – H4 include a two-way interaction design for the analysis. The analysis does not include all the possible interactions of the four variables at the same time, in line with proposed hypotheses, to obtain clearer and more identifiable results. Table 2.3 provides a detailed description.

Table 2.3. Factorial design

Factors	Levels	Analysis	Hypotheses test
Presence of emojis	1. With emoji 2. No emoji	One-way analysis Presence → engagement	H1
Type of emoji	1. Non-facial 2. Facial	Two-way analysis Presence and type → engagement	H2
Repetition	1. 3 emojis 2. 1 emoji	Two-way analysis Presence and repetition → engagement	H3
Position	1. Left 2. Right	Two-way analysis Presence and position → engagement	H4

2.3.6. Models

The analysis includes two explanatory configurations for each study. Model 1 only depicts the effect of the use of emojis; its sole independent variable is emojis versus no-emojis, and the dependent variables are opening the email, total openings for the four studies, and clicks in study 1 and 2, along with reading the email in study 3 and 4.

The data analysis relies on linear or logit regression, depending on whether the dependent variable is metric or binary. For example, for the opening dependent variable, model 1 uses the following logistic regression:

$$P(Y = 1) = \frac{\exp(\alpha + \beta X_1)}{1 + \exp(\alpha + \beta X_1)},$$

where $P(Y=1)$ denotes the probability of opening and X_1 denotes a binary variable that takes value 1 when there is presence of emoji. Then model 2 adds other independent variables related to the use of emojis: the type of emoji for study 1 and 2 and type, repetition, and position variables for study 3 and 4. The econometric approaches for the data analysis follow the same rules, such that if the dependent variable is total openings, model 2 takes a linear regression form, as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4,$$

where Y denotes total openings, and X_1, X_2, X_3 and X_4 denote binary variables whose value 1 represent presence of emoji, non-facial emoji, repeated emojis (3 emojis) and emoji on the left, respectively.

2.3.7. Study 1 and 2

Study 1 and 2 were designed to determine whether the presence of emojis (emoji vs. non-emoji) and their type (non-facial vs. facial) influence customer engagement (open email, total openings, and clicks). They were carried out to test if the presence of emojis in emails increases customer engagement (Hypothesis 1) and moderating role of type of emojis (non-facial) on the relationship between presence of emojis and customer engagement, (Hypothesis 2). Manipulation of emojis (conditions) affected to the message subject and the Call to Action (CTA) within the message body.

2.3.7.1. Study 1

2.3.7.1.1. Design and procedure

Table 2.4 provides a detailed description of conditions and sample in study 1. Emails, sent to 11,025 customers of the car brand, contain a playlist recommendation for listening in the car. In line with this non-commercial content, the CTA invited recipients to click to see the full playlist on a blog. The conditions for study 1 were emoji, no-emoji, facial (😊), and non-facial emoji (💡), to test their potential influence on customer engagement (opens, total openings, and clicks).

Table 2.4. Study 1 and 2 designs

		Study 1			Study 2		
Condition 1	Condition 2	Text in subject line	Call to action	Sample	Text in subject line	Call to action	Sample
No emoji*		Playlist to listen to in this quarantine	Go to the blog	5,518	Is anyone looking for counseling on digital marketing?	I need digital counseling	1,657
	- Facial emoji	🎶 Playlist to listen to in this quarantine	🎶 Go to the blog	2,770	🎧 Is anyone looking for counseling on digital marketing?	🎧 I need digital counseling	827
Emojis**	-Non-facial emoji	🎧 Playlist to listen to in this quarantine	🎧 Go to the blog	2,737	🔔 Is anyone looking for counseling on digital marketing?	🔔 I need digital counseling	831

* No information on condition 2 is displayed when condition 1 is “No emoji”, because if there is no emoji, there cannot be a distinction between facial and non-facial.

**The condition with emojis is the sum of the non-facial and facial emojis.

2.3.7.1.2. Results and discussion

Table 2.5 summarizes estimation results for study 1. One-way analysis test the main (H1) hypothesis and Two-way (Presence of emojis × type of emoji) analysis was used to test interaction hypothesis (H2). The results show that emojis increased the total number of openings ($0.034, p < 0.05$) but not the number of people who opened the message (opening). In the presence of the emoji, more subscribers clicked on the CTA ($0.421, p < 0.01$). However, the type of emoji was not significant for determining opening, total opening, or clicks.

Results support H1 and if brands are more playful, target younger users, and rely on informal communication, emojis influence in the number of times users open an email but

not the decision to open it. The presence of emojis encouraged clicking on a CTA, but the findings cannot provide sufficient evidence to support H2.

Table 2.5. Results of the regressions in study 1 and 2

Model	Independent Variables	Study 1			Study 2	
		Opening	Total openings ^a	Click	Opening	Total openings ^a
	Constant	-0.763***	0.331***	-3.943***	-1.567***	0.226***
	Emoji vs. no emoji	0.063	0.034**	0.421***	0.167*	0.040
Model 1	<i>Goodness of fit tests</i>					
	LR	2.30		11.12***	3.497*	9.687***
	ANOVA (Test F)		6.029**			2.541
	Constant	-0.763***	0.331***	-3.94***	-1.567***	0.226***
	Emoji vs. no emoji	0.058	0.035**	0.305*	0.147	0.045
	Type of emoji (non-facial)	0.008	-0.002	0.222	0.040	-0.009
Model 2 ^b	<i>Goodness of fit test</i>					
	LR	2.32		12.99***	3.60	10.574***
	ANOVA (Test F)		3.019**			1.299

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

^aLinear regression

^b the results only display direct effects because the direct effect of the emoji type variable has already captured the interaction effect (emoji and non-facial emoji). The non-facial condition cannot occur if there is no emoji.

2.3.7.2. Study 2

2.3.7.2.1. Design and procedure

The recipients of this email; 3,315 subscribers of a marketing agency (table 2.4 provides a detailed description), held professional positions such as marketing managers, chief marketing officers (CMO), and entrepreneurs, among others. The email offered free counseling, and the CTA invited recipients to schedule a date for this free counseling. The conditions matched those from study 1.

2.3.7.2.2. Results and discussion

Table 2.5 summarizes estimation results for study 2 and two-way (Presence of emojis \times type of emoji) analysis was used to test H2. With some divergent outcomes compared with study 1, emojis improved the probability of opening the e-mail ($0.167, p < 0.10$) but not total openings. The probability of clicking increased in the condition with the emoji ($0.512, p < 0.01$). Again, the type of emoji was not significant.

Study 2 support H1. Emojis appear to influence recipients' decision to open emails if the brands adopt a serious brand personality, target a professional group, and feature formal communication. In study 1 and 2, the presence of emojis encouraged clicking on a CTA, which represents a key measure of customer engagement, but the findings cannot provide sufficient evidence to support H2.

2.3.8. Study 3 and 4

Then study 3 and 4 were conducted with the same brands of study 1 and 2. Design involves the same independent variables (presence, and type of emoji), and adds two more independent variables: repetition (repetitions or 3 emojis vs. no repetition or 1 emoji) and position (left vs. right) of emojis. The objective of study 3 and 4 was to verify the hypotheses that were tested in study 1 and 2 (H1 and H2) but also to test if repetition of emojis moderates the impact of emojis on customer engagement (Hypotheses 3) and if the position of emojis moderates the impact of emojis on customer engagement (Hypotheses 4). In these studies, subject lines and text were manipulated to reflect the different conditions.

2.3.8.1. Study 3

2.3.8.1.1. Design and procedure

Table 2.6 provides a detailed description of conditions and sample sizes in study 3. In this study, 11,098 car brand customers received an email that contains a story about an iconic car model from the brand; though it thus refers to a product, the text is only informative. In the condition with emojis, they appear in the text of the email reflecting the distinct moderating conditions (i.e., type, repetition of emojis and position), and no CTA is included (see table 2.6 for detailed description). Thus, the conditions in this study were emoji, no

emoji, non-facial, facial, three (😍😍😍) and one emoji (🚗), and left and right positioning in the subject line or text. To determine if these uses of emojis increase customer engagement, the measure were reading instead of clicks, and open, total openings.

Table 2.6. Study 3 and 4 designs

		Study 3		Study 4	
Condition 1	Condition 2	Subject line	Sample	Subject line	Sample
No emoji**		Let's travel to the past with the beetle	3,658	Likes but no sales?	1,090
	-One facial emoji, right side	Let's travel to the past with the beetle 😍	941	Likes but no sales? 🤔	305
	-One non-facial emoji, right side	Let's travel to the past with the beetle 🚗	940	Likes but no sales? 💰	311
	-Three facial emojis, right side	Let's travel to the past with the beetle 😍😍😍	905	Likes but no sales? 🤪JJJ	315
	-Three non-facial emojis, right side	Let's travel to the past with the beetle 🚗🚗🚗	947	Likes but no sales? 💰💰💰	284
	-One facial emoji, left side	😍 Let's travel to the past with the beetle	943	🤔 Likes but no sales?	294
	-One non-facial emoji, left side	🚗 Let's travel to the past with the beetle	909	💰 Likes but no sales?	277
	-Three facial emojis, left side	😍😍😍 Let's travel to the past with the beetle	927	🤔🤔🤔 Likes but no sales?	294
	-Three non-facial emojis, left side	🚗🚗🚗 Let's travel to the past with the beetle	928	💰💰💰 Likes but no sales?	254

* No information on condition 2 is displayed when condition 1 is “No emoji”, because if there is no emoji, there cannot be a distinction between facial and non-facial.

**The condition with emojis is the sum of the conditions type, repetition, and position.

2.3.8.1.2. Results and discussion

Table 2.7 summarizes estimation results for study 3. One-way analysis showed the manipulation check of presence of emojis (Emoji vs. no emoji) and Two-way analysis was used to analyze H2, H3 and H4. The results reveal that the presence of emojis increases total openings ($0.035, p < 0.01$) but decreases the probability of reading ($-0.129, p < 0.10$). Non-

facial emojis exert positive, significant influences on opening, total openings, and reading (0.302, $p < 0.01$; 0.044, $p < 0.01$; 0.464, $p < 0.01$, respectively), and three emojis in the subject line encourage more opening and total openings (0.110, $p < 0.10$; 0.028, $p < 0.10$, respectively). However, contrary to the predictions, a left position of the emojis has a negative, significant influence on reading (-0.191, $p < 0.05$).

Study 3 support H1, H2 and H3, but not support H4. The evidence indicates that emojis mainly influence the number of times subscribers open the email, but they negatively affect reading and non-facial emojis and their repetition appear to increase customer engagement, but the position of the emoji evokes effects opposite those predicted.

Table 2.7. Results of study 3 and 4

Model	Independent Variables	Study 3			Study 4	
		Opening	Total openings ^a	Reading	Opening	Total openings ^a
Model 1	Constant	-1.464***	0.214***	-2.404***	-0.896***	0.364***
	Emoji vs. no emoji	-0.031	0.035***	-0.129*	-0.111	0.093***
	<i>Goodness of fit test</i>					
	LR	0.366		2.917*	1.860	4.477**
	ANOVA (Test F)		7.663***			6.780***
	Constant	-1.464***	0.214***	-2.404***	-0.896***	0.364***
	Emoji vs. no emoji	-0.204***	0.002	-0.317***	-0.111	0.092*
Model 2 ^b	Type of emoji (non-facial)	0.302***	0.044***	0.464***	-0.001	-0.024
	Repetition of emojis (3)	0.110*	0.028*	0.047	0.083	0.005
	Position (left)	-0.086	-0.006	-0.191**	-0.087	0.020
	<i>Goodness of fit test</i>					
	LR	31.37***		34.74***	3.522	8.692*
	ANOVA (Test F)		5.265***			1.855

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

^aLinear regression

^b The results only display direct effects because the direct effect of the emoji type/repetition/position variable has already captured the interaction effect (emoji and type/repetition/position). The type/repetition/position condition cannot occur if there is no emoji.

2.3.8.2. Study 4

2.3.8.2.1. Design and procedure

Table 2.6 provides a detailed description of conditions and sample sizes in study 4. The 3,424 subscribers to a marketing agency who received the email in this study could read informative tips to improve their digital marketing strategies. The design includes emojis in the text of the email and related to the content (table 2.6 provides a detailed description). The conditions exactly match those from study 3 except for using facial (😊) and non-facial (💰💰💰) emojis.

2.3.8.2.2. Results and discussion

Table 2.7 summarizes estimation results for study 4. To test H1 one-way analysis was used and H2, H3 and H4 a two-way analysis. The presence of emojis increased total openings (0.093, $p < 0.01$) but decreased the probability of reading (-0.305, $p < 0.05$). In study 4, none of the features of the emoji—type, repetition, or position—is significant.

Study 3 solely support H1. The evidence in study 4 indicates that emojis influence the number of times subscribers open the email, but they negatively affect reading. There are no significant effects of the type, repetition, or position of emojis.

2.4. General Discussion

This study has sought to analyze the effect of emojis on customer engagement in email marketing campaigns, according to the type used and their presentation. The results indicate that the presence of emojis in the subject line of an email and in CTAs increases opening of emails and clicks on CTAs, respectively. However, they do not encourage more reading, in contrast with the initial expectations. Arguably, emojis in the text of an email prompt scanning effects, particularly among recipients with low motivation or ability to process a message (Petty and Cacioppo, 1986). But in the subject lines or CTA, emojis could have more positive impacts, because their visual prominence exerts a greater impact for people

making quick decisions (Milosavljevic *et al.*, 2012). Thus, inattentive, or unmotivated readers can use emojis, through a peripheral route, to make decisions (Petty and Cacioppo, 1986). As both visual stimuli (Petit *et al.*, 2019) and rhetorical elements, emojis attract attention (Ge and Gretzel, 2018; Scott, 1994) and cause users to process the messages peripherally to make decisions quicker (Petty and Cacioppo, 1986).

Furthermore, emojis improve customer engagement (opening and total number of openings) to a greater extent when they are non-facial, especially if those emojis relate to the message (Scott, 1994). The results reveal more positive and significant effects of the email for a car brand, aimed at a young consumer segment that provided informal communication, for which the emoji related closely to the brand and message. Recipients thus likely perceived personalization efforts (Willoughby and Liu, 2018), because the non-facial emojis represented the focal product, which can improve customer engagement (Petit *et al.*, 2019). Repeating emojis also has a positive influence on customer engagement, in line with prior studies (Riordan, 2017; Willoughby and Liu, 2018), probably by increasing attention to the messages (Willoughby and Liu, 2018) and providing information (Ge and Gretzel, 2018; Moussa, 2019). However, in contrast with theoretical predictions about the influence of an emoji in the left position on customer engagement, the results offer no clear evidence regarding whether a left-side position positively or negatively influences customer engagement. This question requires further research.

Finally, the studies produce varying results, perhaps reflecting unique influences according to the brand's communication (Arya *et al.*, 2018), the target audience, or the industry context (Bai *et al.*, 2019; Danesi, 2016). For example, when customers pursue hedonic goals, they attend more positively to messages (Das *et al.*, 2019). The car brand has a younger audience and a fresher communication style, and it achieved better results by adding emojis. The marketing agency, in a more professional context, did not achieve similar results, probably because recipients regard emojis as less appropriate in formal communication (Danesi, 2016). Together, these findings provide important theoretical and practical implications for marketers regarding how to use different emojis to evoke favorable responses.

2.4.1. Theoretical implications

This study extends previous insights regarding the effectiveness of interactive marketing tools, such as emojis, on customer engagement by testing their use in a depth channel (email) as a distinct and generally untested context (Wang, 2021), as well as analyzing them as potential drivers of customer engagement online (Kaura *et al.*, 2020). By moving beyond social networks, this study demonstrates that emojis as interactive marketing tools can trigger interactive behavior and increase customer engagement, even in a channel less prone to interaction.

The theoretical basis for predicting the effects of visual stimuli involves the theory of visual rhetoric (Scott, 1994); this study applies a unique rhetorical lens to persuasion by email communications, with a focus on a relatively new language form (emojis). The results highlight the need to study and understand structural aspects of persuasive messages. With regard to the implications for emoji rhetoric and marketing rhetoric (Ge and Gretzel, 2018), the current study establishes that emojis are visual and rhetorical language, used to convey a meaning, persuade, generate positive responses, and boost customer engagement. In relation to the ELM (Petty and Cacioppo, 1986), this article also provides evidence that emojis as visual stimuli help inattentive or less motivated customers make decisions, by increasing their engagement with email marketing.

Another theoretical contribution entails the importance of including moderating variables when predicting the effects of interactive marketing tools. Such variables are necessary to clarify how such stimuli work, so their inclusion can lead to more accurate analyses of their consequences for customer engagement. Despite their relevance and potential to align with both the stimuli and the context, variables pertaining to the type of emoji, or their presentation have not been studied simultaneously in previous research into how to make email marketing more interactive and improve customer engagement.

Finally, this study proposes a congruent, complete metric of customer engagement in email marketing settings. This combined measure of customer engagement with emails, comprised of opening, total openings, clicks on CTAs, and reading, can add new nuance to conceptual and practical analyses of the effects of different new media types.

2.4.2. Managerial implications

In digital business settings, brands seek to compete by establishing a marketing strategy that provides an appealing customer experience and evokes their interaction or engagement with the brand. For example, in their email campaigns, brands try to send effective, customized content to reach customers quickly and efficiently (Lee, 2016; Tran and Strutton, 2020). Although it remains challenging to attract customer attention and generate customer engagement in this channel, which is less prone to interaction, brands that succeed might enjoy greater customer loyalty, satisfaction, and purchase intentions, as well as heightened brand profitability. As this study shows, emojis provide an effective tool to capture the attention of users with low motivation, attract them by triggering information processing through a peripheral route, simplifying the decision-making process, and leading them to perform some action (e.g., opening an email, clicking on a CTA), all of which signal increased customer engagement through email communication. Therefore, this research inquiry can enhance the understanding of consumer engagement and branding strategies to maximize marketing return on investment (Vander *et al.*, 2020).

Marketers thus should actively develop strategies for using emojis appropriately, which requires them to take several issues into consideration. First, the emojis should appear in the email subject line and CTAs, not the main text of the email. Second, the choice of emoji to use should reflect careful consideration; non-facial emojis likely work better by making the meaning of the message clear and easy to interpret, as well as closely connected to the product or brand message. Third, practitioners can repeat emojis to attract more attention, though their marginal effect likely decreases with each repetition, to the point they could become redundant. Three emojis seems to be a good option. Fourth, the position of the emojis relative to pertinent text does not seem to have any effect, contrary to prior findings in other contexts (McShane *et al.*, 2021; Provine *et al.*, 2007).

Overall, the findings suggest that brands might develop a “brand emoji code” (Casado-Molina *et al.*, 2019), similar to a brand manual, that specifies when and how to use specific emojis to link with the brand. Such guidelines could help the brand establish a creative, interactive, recognizable brand element, as well as a unique stimulus to boost customer engagement. These codes need to reflect the specific situation of each brand, as signaled by

the variation in the research findings. The influence of emojis appears to depend on the brand's communication style (Arya *et al.*, 2018) or target audience (Bai *et al.*, 2019; Danesi, 2016). Brands that sell to professional clients might not want to use emojis in their email marketing campaigns; those with a fun persona instead might embrace them as playful elements of their marketing efforts.

2.4.3. Limitations and further research

This research demonstrates empirically and for the first time that interactive marketing tools such as emojis can improve customer engagement with email communications. The findings indicate the presence of emojis increases customer engagement, but the varied results across the four studies disclosed further research is needed. First, future research may try to determine precisely which types and presentations of emojis evoke the strongest effects in different contexts and channels because viewers can interpret the same emojis with several meanings depending on the context (Wu *et al.*, 2022). Second, future studies also might address variables not included in the current research, such as the effects of emojis on customer engagement depending on the marketing segments (young people or older adults, B2C or B2B), medium used (email, Facebook, Instagram, LinkedIn), content (sales, promotions, codes, information), operating system (iOS, Android), or device (computer, mobile, tablet). Further research should integrate surveys, content analysis, and neuromarketing tools to provide more in-depth insights.

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Chapter 3. Sound in mode on: How sound stimuli influence customer engagement

Sensory stimuli to influence customer engagement in digital contexts

Chapter 4. Smell, touch, and taste: sensory words as stimuli to influence customer engagement

Sensory stimuli to influence customer engagement in digital contexts

Chapter 5. If you can't touch, imagine it! Haptic sensory words as stimuli to influence customer engagement and the moderation role of NFT

Sensory stimuli to influence customer engagement in digital contexts

Chapter 6. Conclusions

6.1 Summary and Conclusions

This thesis contains four empirical chapters. Chapter 2 evaluates if emojis might boost customer engagement in email marketing and how certain features, such as the type of emoji or the way of emojis' presentation (repetition and position), moderate their effectiveness. Chapter 3 analyzes whether the presence of sound stimuli influences customer engagement and if product type and consumer involvement, moderate the effect of sound on customer engagement. Chapter 4 investigates if the presence of sensory stimuli such as words associated with smell, touch, and taste enhances customer engagement. Finally, in chapter 5, we analyze haptic sensory words and their influence on customer engagement and how the customer need-for-touch (NFT) moderate their effectiveness. In the following subsections the conclusions of each chapter are summarized.

6.1.1. Chapter 2: Boost your email marketing campaign! Emojis as visual stimuli to influence customer engagement

This study evaluates if and how emojis might boost customer engagement in email marketing. We analyze how certain features, such as the type of emoji or the way of emojis' presentation (repetition and position), moderate their effectiveness. This research comprises four experimental studies. The first two analyze whether the presence and the type of emoji (facial vs. non-facial) influence customer engagement. Then, two more studies analyze the influence of the presence and type of emoji, as well as repetitions (repetition vs. no repetitions) and positions (left vs. right). The data collection is through email marketing campaigns, with two types of brands. The analysis is a fractional factorial design in one- and two-way interactions to identify the influence of presentation features. Emojis influence customer engagement and can trigger interactive behaviors and increase customer engagement, even in a channel that generally is less prone to interaction. The emojis increase the probability of opening the email, the number of times email gets opened and clicks to access additional content. This research offers novel implications for interactive marketing and the theory of visual rhetoric because the research establishes how visual stimuli such as emojis can persuade and capture customer attention and increase customer engagement. Practitioners can optimize email marketing by using emojis strategically to attract audience interest, provoke interactions,

build relationships, and generate word of mouth, leading to better consumer experiences, loyalty, and brand profitability.

6.1.2. Chapter 3: Sound in mode on: How sound stimuli influence customer engagement?

The purpose of this study is analyzing the effect of sound stimuli such as sound related to the product and voice-over on customer engagement (sensory experience, approach-avoidance, and emotional response). Moreover, to know if this response is different depending on the type of product (hedonic and utilitarian) and involvement. To provide empirical evidence, this research comprises two studies in different channels (Instagram and Blog), with two different sound stimuli (a sound related to a product and voice-over) for two types of products (hedonic and utilitarian). The factorial design is 2 (sound - no sound) x 2 (hedonic and utilitarian) between subjects. A total of 512 participants interacted with a different condition and then completed a questionnaire. The results indicate that the presence of sound increases the customer engagement, specifically the sound associated with the product in the sensory experience and approach-avoidance response. The interaction of sound with involvement seems to have a negative influence on customer engagement (sensory experience response). The presence of voice positively influences sensory experience and approach-avoidance response because it is persuasive (Strach *et al.*, 2015). The voice negatively influences the emotional response, except in hedonic products. The interaction of the product type (hedonic) with the presence of sound is positive and significant about the influence on the emotional response.

6.1.3. Chapter 4: Smell, touch, and taste: sensory words as stimuli to influence customer engagement

The purpose of this study is to know if sensory stimuli such as words associated with smell, touch, and taste increase customer engagement in digital context. Five A/B experiments were carried out to analyze such relationship. Experimental designs are based on campaigns on Instagram from different brands and products. Experiment 1 evaluates sensory words related to smell with a handmade soap of a cosmetic brand. Experiments 2 and 3, those related to touch with two different books, and experiments 4 and 5, those related to the sense of taste

with an ice cream and artisan bread. In version A of the experiments, the content integrated sensory words related to smell, touch and taste adapted from different authors or words related to senses product's characteristics. In version B, the content included words related to other characteristics of the product that were not related to sensory aspects. The findings show that sensory words, increase the customer engagement, particularly the probability of content interaction (like, comment, save or reply).

6.1.4. Chapter 5: If you can't touch, imagine it! Haptic sensory words as stimuli to influence customer engagement and the moderation role of NFT

The purpose of this chapter is to find out if haptic sensory words, increase customer engagement (approach-avoidance response) and if autotelic and instrumental NFT moderates their effectiveness. This research comprises an experimental study with subscribers of a marketing agency and students. Two different online shopping scenarios are designed and, after visiting one of them, a total of 218 participants answer a questionnaire that collects their approach response and their NFT orientation. The results indicate that haptic sensory words, increase customer engagement, and the interaction of haptic sensory words and autotelic NFT decreases customer engagement and for the instrumental factor is a negative trend (higher NFT, less customer engagement), but it is not significant. This research offers novel implications for the sense of touch and marketing.

6.1.5. Theoretical implications

The theoretical contributions of this thesis are extensive. This study extends the literature of sensory marketing with different sensory stimuli, by integrating the five senses in digital marketing and three, difficult to replicate on the internet (smell, touch, and taste). This thesis extends the literature of sensory marketing with sensory stimuli less studied (e.g., emojis, sounds associated with the product, voice-over, and sensory words). The cognitive sensory theory (Hill, 2003) is extended to sensory stimuli in digital marketing because this type of stimuli can create perceptions and influence cognitively, which leads to behavioral responses such as open, click, like, comment, save or reply (engagement). The sensory stimuli provide evidence to support the ELM (Petty and Cacioppo, 1986), because sensory stimuli could help to inattentive or less motivated customers make decisions by increasing their engagement,

because they are a peripheral element that led consumer's attention and influence their response (engagement).

The literature is extended with the S-O-R model (Mehrabian and Russell, 1974). Analyzing sensory incentives in digital marketing is important stimuli (S) in the digital atmosphere that cause an evaluation (O) and therefore a consumer response (R) (engagement).

The theoretical basis for predicting the effects of visual stimuli involves the theory of visual rhetoric (Scott, 1994). Emojis are visual and rhetorical language, used to convey a meaning, persuade, generate positive responses, and boost customer engagement. The crossmodal mental imagery (Spence and Deroy, 2013) literature is also extended, by integrating sensory words as stimuli that can lead to imagining the sensations of products without physically having them. It also extends crossmodal mental imagery, integrating sensory words as perceptual elements that can be used to complete missing functions through the internet and achieve recreations based on past experiences, which influence customer decisions.

Another theoretical contribution entails the importance of including moderating variables when predicting the effects of sensory stimuli. Such variables are necessary to clarify how such stimuli work, so their inclusion can lead to more accurate analyses of their consequences for customer engagement. The moderating variables in this thesis have been less explored (type of emoji, repetition, position, involvement and NFT), thus, this represents a novel theoretical contribution.

This thesis proposes a congruent, complete metric of customer engagement. This combined measure of customer engagement in email marketing campaigns, advertisement on social networks, and non-behavior customer response (sensory experience, approach-avoidance, and emotional response). This can add new nuance to conceptual and practical analyses of customer engagement.

An important contribution of the thesis is the definition of sensory words, since the previous literature on these terms is focused on labels, terms or only in the field of food. This study extends insights of the effectiveness of sensory stimuli on customer engagement by

moving beyond social networks, integrating less explored digital channels such as emails and blogs.

6.1.6. Managerial implications

In digital business settings, brands seek to compete by establishing a marketing strategy that provides an appealing customer experience and evokes their interaction or engagement with the brand. Sensory stimuli can lead managers to build successful multisensory brand experience, as opposed to more conservative and limited brand relationships, also to create a conscious design of web environments with positive effects on the customer. Thus, the challenge for internet retailers of experiential products is to shift the focus from using purchase cues to more experiential cues (visual, sound, smell, touch, and taste). If people associate a positive experience with sensory stimuli in digital content, they can follow a chain reaction of positive attitudes and intentions that can help stimulate first-time consumption, encourage repeat sales, increase purchases and consequently profitability. In brief, one of the most important managerial implications of this thesis inquiry can enhance the understanding of customer engagement and branding strategies to maximize marketing return on investment (Vander Schee *et al.*, 2020) through sensory stimuli.

Moreover, search engines like Google can include sensory stimuli (emojis, sounds or voice-over and sensory words) in their positioning algorithm and as an SEO (Search Engine Optimization) or SEM (Search Engine Marketing) strategy. In the best SEO and SEM practices, sensory stimuli could be integrated as a relevant element of user experience to improve the ranking of the web page or engagement in ads. Websites platforms, social network and customer or content management software can promote the use of sensory stimuli to improve engagement.

The different ways to measure customer engagement in this thesis provide to brands, marketers, and agencies an extensive variety of ways to measure customer engagement, integrating behavioral and non-behavioral responses.

Specific practical implications for each stimulus are also provided as follows.

6.1.6.1. Visual stimuli

Marketers should actively develop strategies for using emojis appropriately. The findings in chapter 2 suggest that brands might develop a “brand emoji code” (Casado- Molina *et al.*, 2019), similar to a brand manual, that specifies when and how to use specific emojis to link with the brand. Such guidelines could help the brand establish a creative, interactive, recognizable brand element, as well as a unique stimulus to boost customer engagement. These codes need to reflect the specific situation of each brand as signaled by the variation in the research findings. For example, the choice of emoji to use, repetition and position. It is important that brands also consider a brand’s communication style (Arya *et al.*, 2018) or target audience (Bai *et al.*, 2019; Danesi, 2016).

6.1.6.2. Sound stimuli

The influence of sound stimuli on customer engagement has implications for brands in the long-term, like customer loyalty, sales, brand profitability (Lee *et al.*, 2018), but to make sounds effective, professionals must consider several aspects. The sound associated with the product in social networks such as Instagram, generates sensory experience and approach-avoidance response, therefore, if brands integrate sound associated with their product or service in the content, they will get a better response from the consumer when they have low motivation or attention. In blogs, brands should integrate voice-over if they want to get a better result in the sensory experience and approach-avoidance response, but to correctly influence in emotional response, it is necessary to consider product type (De Keyzer *et al.*, 2017). Therefore, it is a good idea for brands to use voice-over to improve emotional response if their products or services are hedonists (Barcelos *et al.*, 2018). Sounds can even reduce purchase intentions in contexts of high involvement (Barcelos *et al.*, 2018), so it is advisable to use sound stimuli when there is low involvement. A good idea is to use it in ads to increase the reach and brand awareness.

6.1.2.3. Olfactory, tactile, and gustatory stimuli

Sensory words also provide extenders managerial contribution for brands. The UX (user experience) writing strategies benefit adding this type of words in online content to

improve the user experience on websites, applications, social networks, or other digital products or services.

Specifically, haptic sensory words provide managerial contributions for retailers with "bricks and clicks" because haptic sensory words related to touch can be an approach strategy in the online channel that motivates them to make their physical purchases. In this way, it could synchronize both channels, or on the contrary, in a physical store offer all possible sensory stimuli with touch and highlight that contact experience in digital channels with haptic sensory words and other types of digital interfaces.

The different levels of NFT and type of customers provide insights for brands to create differentiated sensory strategies for each group. Offering advertising or physical contact experiences to those with high NFT and improving digital strategies for those with low NFT.

6.1.7. Limitations and further research

This research demonstrates empirically that sensory stimuli improve customer engagement, but there are limitations. In this section, we discuss the common limitations and propose further research to extend the results of the thesis.

Future studies might address variables not included in the current research, such as different marketing segments (young people or older adults, B2C (business-to-consumer) or B2B (business-to-business)); the medium used (email, e-commerce, websites, apps, TikTok, Facebook, and LinkedIn); type of content (sales, promotions, codes, and information); operating system (iOS, and Android), type of product (disgusting, categories, product familiarity, services), or device (computer, mobile and tablet). More research is needed to strengthen the findings of this thesis regarding different moderating variables.

Different cues may have priority in product evaluation depending on how those cues are presented and the quality of the information conveyed through those cues (Citrin *et al.*, 2003). Thus, it is important pretest the sensory stimuli in future research. In this thesis was not carried out. The research used only references from the previous literature, sensory characteristics of each product, and we worked with the preferences of brands that collaborated in each study.

There are some moderating variables in this thesis that are not significant or show contrary findings to expected. Further research is recommended for this type of variable, to help better understand the impact of the moderating role.

In this research, each of the senses is analyzed independently and their influence on engagement, but other variables can be integrated, such as the interaction between the senses (taste and smell), or dependent variables such as attitude towards the brand, memory, evaluation, sales, etc. Thus, multisensory signals (image, sound, sensory words, etc.) can be investigated, which may be superior in influencing consumer behaviors compared to the use of a single sensory signal.

The customer engagement focused primarily on positive engagement, future studies are, therefore, needed to incorporate the notions of both positively as well as negatively valence expressions of customer engagement.

Further research should integrate content analysis and Neuromarketing tools to provide more in-depth insights. Finally, it is important to consider the ethic of include sensory stimuli in marketing strategies to persuade customers and influence their decisions.

6.2. References

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Resumen en español de la tesis

Sensory stimuli to influence customer engagement in digital contexts

Estímulos sensoriales para influir en el compromiso del
consumidor en contextos digitales



**VNiVERSiDAD
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AUTORIZACIÓN DE LOS DIRECTORES
DE LA TESIS PARA SU PRESENTACIÓN

Los doctores Don Óscar González Benito y Don Álvaro Garrido Morgado, como directores de la Tesis Doctoral “Sensory stimuli to influence customer engagement in digital contexts” realizada por Doña Evelyn Sophía Valenzuela Gálvez en el Departamento de Administración y Economía de la Empresa de la Universidad de Salamanca, autorizan su presentación a trámite dado que reúne las condiciones necesarias para su defensa.

Y para que así conste, a los efectos oportunos, se firma la presente en Salamanca a 6 de Julio de 2022.

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RESUMEN

El marketing sensorial es una táctica poderosa que se dirige al menos a uno de los cinco sentidos para obtener respuestas significativas (Sarathy, 2020). El impacto de la marca mejora un 30% cuando se involucra más de un sentido y las estrategias de marketing que involucran todos los sentidos aumentan las ventas de alimentos y bebidas (Cooper, 2013). Por ejemplo, el olor de una tienda Starbucks evoca un aroma memorable y consistente. Antes de COVID-19, más de la mitad de los compradores visitaban una tienda física para tocar o ver de primera mano un producto que pueden terminar comprando en línea (Sarathy, 2020). ¿Cómo pueden las marcas evocar estos mismos sentidos en su canal de comercio electrónico? La respuesta es imitar las experiencias sensoriales en la tienda para involucrar completamente a los clientes. Por ejemplo, para el sentido de la vista, hay una gran cantidad de señales altamente visuales en línea, especialmente importantes para los minoristas en línea (es decir, gifs, emojis, imágenes, videos). Para el sentido del oído hay *playlist*, voz en *off*, música, o *soundtrack auto-play* cuando la gente visita la web, etc. El resto de sentidos (olfato, gusto, tacto) son más complicados de replicar, pero las marcas utilizan palabras descriptivas e imágenes que simulan el olor, el tacto o el sabor del producto (Raeburn, 2020; Sarathy, 2020).

McDonald's y Pepsi usan emojis en marketing digital (Danesi, 2016), Visa usa un conjunto de elementos digitales, incluida una combinación de animación, sonido y vibración haptica cuando los clientes completan una transacción y NEST describe cada tipo de aroma, y estado animico. Estos detalles facilitan que los consumidores imaginen las sensaciones (Sarathy, 2020).

Conceptos principales

El marketing sensorial es el marketing que involucra los sentidos de los consumidores y afecta su percepción, juicio y comportamiento (Krishna, 2012). En esta investigación, definimos un estímulo como cualquier entrada sensorial (p. ej., atributos del producto, como aroma, sabor, textura o señales relacionadas con los sentidos, como imágenes, sonidos y voz que utilizan las marcas) que influyen en el compromiso del consumidor (*customer engagement*).

Es el papel cada vez mayor de las redes sociales lo que ha creado la necesidad del concepto de compromiso del consumidor (Bielski, 2008), y tanto los profesionales como los académicos buscan comprender cómo las empresas pueden facilitar el compromiso del consumidor en un entorno cada vez más interactivo. Como resultado, los especialistas en marketing están realizando importantes inversiones para brindarles a los clientes experiencias digitales fluidas y soluciones personalizadas inmediatas para involucrarlos con sus marcas (Rasool *et al.*, 2020).

El compromiso del consumidor o *customer engagement* se define como un estado psicológico que ocurre debido a experiencias interactivas y co-creativas de clientes o consumidores con marcas, actores, objetos o eventos específicos (Hollebeek *et al.*, 2014) o como lo señala el Marketing Science Institute (MSI), el compromiso del consumidor es una manifestación del comportamiento del cliente hacia la marca o la empresa “más allá de la compra” (MSI, 2013). El compromiso del consumidor está relacionado con un comportamiento particular y es una construcción multidimensional (Kuvykaite y Taruté, 2015). Esta investigación utilizó dimensiones conductuales y no conductuales. La dimensión conductual es el esfuerzo y la energía que hace el consumidor (me gusta, compartir, abrir, leer o hacer clic) para interactuar con un objeto de participación (es decir, correo electrónico de marca, publicación en redes sociales). La forma no conductual es a través de respuestas relacionadas con experiencias sensoriales (Brakus *et al.*, 2009), acercamiento-evitación (Mehrabian y Russel, 1974) y respuestas emocionales (Vander *et al.*, 2020).

Las dimensiones conductuales se usan ampliamente en marketing digital porque proporcionan una medida del interés del consumidor que es relevante y proporciona una medida de la "exposición" real a un anuncio, correo electrónico o publicación, lo cual es difícil para la mayoría de los canales de publicidad (Sahni *et al.*, 2018). El compromiso del consumidor se mide por me gusta, compartir, guardar, hacer clic o comentar (Davis *et al.*, 2019; McShane *et al.*, 2021), aunque no todos denotan el mismo nivel de compromiso (Calder *et al.*, 2009). Por ejemplo, Muntinga *et al.*, (2011) presentó una tipología que clasifica la interacción:

- El nivel más bajo de consumo de contenido (por ejemplo, ver videos e imágenes o leer reseñas de productos)

- Nivel moderado (p. ej., participar en las conversaciones o comentar videos/ímgenes)
- El nivel más alto, que se refiere a la creación y el intercambio de contenido

Integramos dimensiones no conductuales porque es importante integrar las diferentes dimensiones que surgieron ampliamente de nuestra revisión de la literatura. Esas respuestas se definen de la siguiente manera: La experiencia sensorial es la dimensión que se refiere a si los estímulos produjeron sensaciones. Es decir, si las personas percibieron algo a través de los cinco sentidos, por ejemplo, una intensificación del sentido del olfato, el gusto, la vista o el tacto. La respuesta de acercamiento-evitación son las respuestas positivas o negativas al entorno digital provocadas por estímulos (sonido, color, diseño, etc.) como la decisión de seguir, hacer clic en una imagen, dar me gusta, compartir un enlace o volver a la tienda en línea o sitio web y la respuesta emocional es cuando un oyente percibe o reconoce emociones expresadas por estímulos. Se trata de cómo se siente el consumidor a corto plazo cuando ve, escucha o percibe a través de sus sentidos. (por ejemplo, estimulado, emocionado).

El compromiso del consumidor es relevante porque aumenta el alcance de los mensajes, ayuda a identificar clientes potenciales, mejora las relaciones con los clientes y contribuye a la generación de actitudes y creencias favorables hacia la marca (Calder *et al.*, 2009; Sahni *et al.*, 2018). Además, permite a los clientes crear un vínculo con la marca y genera capital de marca a largo plazo para la empresa, mejora la reputación, lo que influye positivamente en el valor de marca basado en el cliente y puede influir en los ingresos, las ventas y la rentabilidad (Lee *et al.*, 2018; Sahni *et al.*, 2018; Vivek *et al.*, 2012). En resumen, el compromiso del consumidor es una forma de capital social que permite a las marcas obtener ventajas competitivas (Kemp *et al.*, 2021; Kim *et al.*, 2021).

Literatura previa sobre marketing sensorial

En un entorno minorista tradicional, la atmósfera creada especialmente por las señales ambientales sensoriales (color, iluminación, música, aroma) influye en el comportamiento de los clientes a través de sus reacciones emocionales (Baker *et al.*, 1992) y difundir un olor, color o música agradable puede contribuir a la evaluación positiva de la tienda e influir en el tiempo y el dinero que los consumidores gastan allí (Chebat y Michon, 2003; Sherman *et al.*, 1997). Es probable que lo mismo suceda en los entornos en línea (Liu *et al.*, 2018)

El impacto del marketing sensorial no se limita en el entorno online, pero no necesariamente atraviesa los mismos canales que los utilizados en el entorno físico (Petit *et al.*, 2019). Es probable que cuando los consumidores experimentan estímulos en el mundo real, el cerebro capte estados perceptuales, motores e introspectivos relacionados con los diversos sentidos y los integre en representaciones multisensoriales que se almacenan en la memoria (Barsalou, 2008). Posteriormente, al tener experiencias relacionadas con el producto en los sitios web, los consumidores pueden definir las expectativas sensoriales (Petit *et al.*, 2019).

Los sonidos, la tecnología táctil aplicada en entornos virtuales (Hultén, 2011), la información que transmite percepciones sensoriales (Krishna y Schwarz, 2014) y el diseño consciente en entornos web (Petit *et al.*, 2019), son estrategias sensoriales para ofrecer una experiencia de marca multisensorial. De esta forma la marca puede volverse más individual y personal para el cliente (Hultén, 2011), lo que permite comunicar mensajes personalizados que pueden influir en el procesamiento de los mensajes e impactar en el compromiso del consumidor (Willoughby y Liu, 2018).

Se ha investigado mucho sobre marketing sensorial, pero aún se necesita investigación adicional en muchos aspectos (Krishna, 2012), principalmente en marketing digital, donde todavía hay pocas contribuciones sobre estímulos sensoriales (Petit *et al.*, 2019). Si bien los cinco sentidos humanos son importantes en la creación de experiencias de marca (Hultén, 2011), aún no existe suficiente investigación sobre cada uno de los sentidos (olfato, oído, gusto, haptico, visión) y su influencia en el comportamiento del consumidor (Krishna, 2012). Todavía hay poca investigación sobre los diferentes tipos de estímulos visuales, auditivos (Petit *et al.*, 2019), olfativos, gustativos y los elementos sustitutivos del tacto (Peck y Childers, 2003).

Objetivos y contribuciones

Esta tesis mejora las implicaciones teóricas y de gestión sobre los estímulos sensoriales en el marketing digital y su influencia en el compromiso del consumidor. Queremos responder a la convocatoria de artículos que destacan la falta de estudios empíricos y experimentales sobre los estímulos sensoriales en el marketing digital y cómo influyen en el compromiso del consumidor (Krishna, 2012; Petit *et al.*, 2019). Se necesita investigación

empírica adicional para identificar los impulsores del compromiso del consumidor en línea (Kaura *et al.*, 2020) y optimizar su uso en diferentes canales de comunicación (Wang, 2021), como por ejemplo, correo electrónico, blogs y sitios web. La investigación actual aborda estos temas relevantes. Por lo tanto, además de analizar el efecto de los estímulos sensoriales en el compromiso del consumidor, este estudio investiga el papel de las variables moderadoras.

Realizamos un estudio para los cinco sentidos porque aún no hay suficiente investigación sobre cada uno de los sentidos (olfato, oído, gusto, tacto, visión) y su influencia en el compromiso del consumidor (Krishna, 2012). Analizamos los emojis como estímulos visuales para influir en el compromiso del consumidor en el marketing por correo electrónico. Ningún estudio, según el conocimiento de los autores, analiza los efectos de los emojis en el marketing por correo electrónico como estímulos visuales, a pesar de que ese canal llega en promedio a tres veces más clientes que Facebook y Twitter combinados (Lee, 2016) y de que las campañas de correo electrónico también son eficientes, económicas y efectivas (Lee, 2016; Tran y Strutton, 2020). El estudio aborda preguntas relevantes. Por ejemplo, ¿pueden los emojis aumentar el compromiso del consumidor en un canal que, a priori, es menos propenso a interactuar, como el correo electrónico? Si es así, ¿qué características hacen que los emojis sean efectivos? El estudio investiga la influencia del tipo de emoji, la repetición y la posición como variables moderadoras (Capítulo 2). Para el sentido del oído, hay poca investigación sobre otros tipos de sonidos diferentes a la música (por ejemplo, producto asociado con un producto, voz, efectos de sonido, ruido, etc.) (Chattopadhyay *et al.*, 2003). Por esta razón, estudiamos si la presencia de estímulos auditivos (producto asociado con un producto y voz en *off*) influye en el compromiso del consumidor y si el tipo de producto y la implicación del consumidor moderan el efecto del sonido en el compromiso del consumidor (Capítulo 3).

Las marcas en línea carecen de la capacidad de crear una experiencia física, no se pueden estimular todos los sentidos. Sin embargo, los clientes evalúan los productos a través de estímulos textuales y visuales (elementos de diseño) en los sitios web (Bleier *et al.*, 2019). Los consumidores no necesariamente necesitan tocar u oler los productos para obtener la información sensorial relevante, también pueden imaginar las propiedades sensoriales esperadas de los productos en función de sus experiencias previas con el apoyo de interfaces

digitales básicas (por ejemplo, pantalla, mouse y auriculares) o con una descripción escrita de las propiedades sensoriales (Petit *et al.*, 2019). Por ello investigamos si los estímulos sensoriales como las palabras asociadas con el olfato, el tacto y el gusto aumentan el compromiso del consumidor (Capítulo 4) y agregamos cómo la necesidad de tocar (NFT por sus siglas en inglés), modera la relación de la presencia de palabras sensoriales hápticas en el compromiso del consumidor (Capítulo 5).

Evaluamos el efecto de los estímulos sensoriales en diferentes dimensiones del compromiso del consumidor y diferentes técnicas (estudio experimental con clientes reales, datos del comportamiento real del consumidor y cuestionarios) y diferentes canales digitales, no solo redes sociales. En resumen, a través de diferentes estudios experimentales, los objetivos de la tesis son: i) estudiar la influencia de la presencia de estímulos sensoriales (visuales, auditivos, olfativos, hápticos y gustativos) en el compromiso (*engagement*) del consumidor, ii) y analizar diferentes variables que moderan esta relación.

A su vez, esta investigación hace varios aportes. Los hallazgos detallados pueden ayudar a las marcas y a los especialistas en marketing a desarrollar estrategias de marketing efectivas que deberían mejorar el compromiso del consumidor, la lealtad del cliente e incluso el rendimiento de la marca.

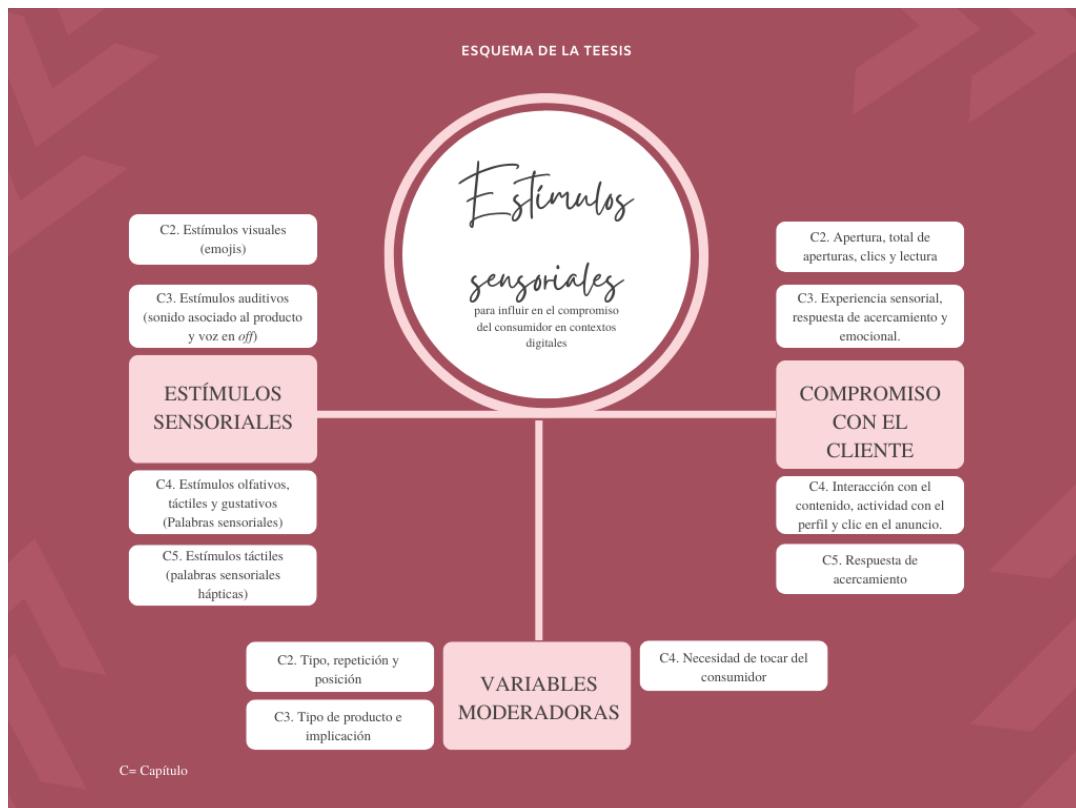
Estructura de la tesis

La presente tesis está estructurada de la siguiente manera:

El Capítulo 2 evalúa si los emojis pueden impulsar el compromiso del consumidor en las campañas de marketing por correo electrónico y cómo lo hacen. La investigación tiene como objetivo analizar los efectos de los emojis e investiga cómo ciertas características, como el tipo de emoji o la forma de presentación de los emojis (repetición y posición), moderan su efectividad. El Capítulo 3 estudia si la presencia de estímulos auditivos influye en el compromiso del consumidor (experiencia sensorial, respuesta de acercamiento-evitación y respuesta emocional) en Instagram y blogs. Este capítulo evalúa si el tipo de producto y la implicación del consumidor moderan el efecto del sonido en el compromiso del consumidor. Creamos un escenario experimental en Instagram y blogs, y recopilamos los datos con un cuestionario.

El Capítulo 4 analiza si los estímulos sensoriales, como las palabras asociadas con el olfato, el tacto y el gusto, mejoran el compromiso del consumidor con publicaciones y anuncios de diferentes marcas en Instagram. El Capítulo 5 aborda las palabras sensoriales hápticas y su influencia en el compromiso del consumidor, y también cómo ciertas características, como la necesidad de contacto del cliente (NFT) moderan su efectividad, a través de un escenario experimental y un cuestionario. Finalmente, el Capítulo 6 discute las conclusiones e implicaciones para la teoría y la práctica.

Figura 1.1. Estructura de la tesis



CONCLUSIONES

Esta tesis contiene cuatro capítulos empíricos. El Capítulo 2 evalúa si los emojis pueden impulsar el compromiso del consumidor en el marketing por correo electrónico y cómo ciertas características, como el tipo de emoji o la forma de presentación de los emojis (repetición y posición), moderan su efectividad. El Capítulo 3 analiza si la presencia de estímulos auditivos influye en el compromiso del consumidor y si el tipo de producto y la implicación del consumidor moderan el efecto del sonido en el compromiso del consumidor. El capítulo 4 investiga si la presencia de estímulos sensoriales, como palabras asociadas con el olfato, el tacto y el gusto, mejora el compromiso del consumidor. Finalmente, en el capítulo 5, analizamos las palabras sensoriales hápticas y su influencia en el compromiso del consumidor y cómo la necesidad de tocar (NFT) del cliente modera su efectividad. En las siguientes subsecciones se resumen las conclusiones de cada capítulo.

Capítulo 2:

Este estudio evalúa si los emojis pueden impulsar el compromiso del consumidor en el marketing por correo electrónico. Se evalúa cómo ciertas características, como el tipo de emoji o la forma de presentación de los emojis (repetición y posición), moderan su efectividad. Esta investigación comprende cuatro estudios experimentales. Los dos primeros analizan si la presencia y el tipo de emoji (facial vs. no facial) influyen en el compromiso del consumidor. Luego, dos estudios más analizan la influencia de la presencia y tipo de emoji, así como las repeticiones (repetición vs. no repeticiones) y posición de los emojis (izquierda vs. derecha). La recogida de datos es a través de campañas de email marketing, con dos tipos de marcas. El análisis es un diseño factorial fraccionado en interacciones de una y dos vías para identificar la influencia de las características de presentación. Los emojis influyen en el compromiso del consumidor y pueden desencadenar comportamientos interactivos y aumentar la participación del cliente, incluso en un canal que generalmente es menos propenso a la interacción. Los emojis aumentan la probabilidad de abrir el correo electrónico, la cantidad de veces que se abre el correo electrónico y los clics para acceder a contenido adicional. Esta investigación ofrece implicaciones novedosas para el marketing interactivo y la teoría de la retórica visual porque la investigación establece cómo los estímulos visuales como los emojis pueden persuadir y captar la atención del cliente y aumentar el compromiso

del consumidor. Los profesionales pueden optimizar el marketing por correo electrónico mediante el uso de emojis estratégicamente para atraer el interés de la audiencia, provocar interacciones, construir relaciones y generar el boca a boca, lo que lleva a mejores experiencias del consumidor, lealtad y rentabilidad de la marca.

Capítulo 3:

El propósito de este estudio es analizar el efecto de los estímulos auditivos, como el sonido relacionado con el producto y la voz en *off*, en el compromiso del consumidor (experiencia sensorial, acercamiento-evitación y respuesta emocional). Además de saber si esta respuesta es diferente según el tipo de producto (hedónico y utilitario) y de la implicación del consumidor. Para aportar evidencia empírica, esta investigación comprende dos estudios en diferentes canales (Instagram y Blog), con dos estímulos auditivos diferentes (un sonido relacionado con un producto y una voz en *off*) para dos tipos de productos (hedónico y utilitario). El diseño factorial es 2 (sonido - sin sonido) x 2 (hedónico y utilitario) entre sujetos. Un total de 512 participantes interactuaron con una condición diferente y luego completaron un cuestionario. Los resultados indican que la presencia de sonido aumenta el compromiso del consumidor, específicamente el sonido asociado al producto en la experiencia sensorial y la respuesta de acercamiento-evitación. La interacción del sonido con la implicación parece tener una influencia negativa en el compromiso del consumidor (respuesta de la experiencia sensorial). La presencia de la voz influye positivamente en la experiencia sensorial y en la respuesta de acercamiento-evitación porque es persuasiva (Strach *et al.*, 2015). La voz influye negativamente en la respuesta emocional, excepto en productos hedónicos. La interacción del tipo de producto (hedónico) con la presencia de sonido es positiva y significativa en cuanto a la influencia sobre la respuesta emocional.

Capítulo 4:

El propósito de este estudio es saber si los estímulos sensoriales, como las palabras asociadas con el olfato, el tacto y el gusto, aumentan el compromiso del consumidor en el contexto digital. Se realizaron cinco experimentos A/B para analizar dicha relación. Los diseños experimentales se basan en campañas de diferentes marcas y productos en Instagram. El experimento 1 evalúa palabras sensoriales relacionadas con el olfato con un jabón

artesanal de una marca de cosméticos. Experimentos 2 y 3, los relacionados con el tacto con dos libros diferentes, y experimentos 4 y 5, los relacionados con el sentido del gusto con un helado y pan artesanal. En la versión A de los experimentos, el contenido integró palabras sensoriales relacionadas con el olfato, el tacto y el gusto adaptadas de diferentes autores o palabras relacionadas con las características de los productos de los sentidos. En la versión B, el contenido incluía palabras relacionadas con otras características del producto que no estaban relacionadas con aspectos sensoriales. Los hallazgos muestran que las palabras sensoriales aumentan el compromiso del consumidor, particularmente la probabilidad de interacción con el contenido (me gusta, comentar, guardar o responder).

Capítulo 5:

El propósito de este capítulo es averiguar si las palabras sensoriales hápticas aumentan el compromiso del consumidor (respuesta de acercamiento) y si la necesidad de tocar autotélica e instrumental del consumidor modera su efectividad. Esta investigación comprende un estudio experimental con suscriptores de una agencia de marketing y estudiantes. Se diseñan dos escenarios de compra online diferentes y, tras visitar uno de ellos, un total de 218 participantes contestan un cuestionario que recoge su respuesta de acercamiento y su orientación a la necesidad de tocar. Los resultados indican que las palabras sensoriales hápticas aumentan la participación del cliente, y la interacción de las palabras sensoriales hápticas y la necesidad de tocar autotélica disminuye el compromiso del consumidor y para el factor instrumental es una tendencia negativa (mayor necesidad de tocar, menor compromiso del consumidor), pero no es significativa. Esta investigación ofrece implicaciones novedosas para el sentido del tacto y el marketing.

Implicaciones teóricas

Las contribuciones teóricas de esta tesis son amplias. Este estudio amplía la literatura del marketing sensorial con diferentes estímulos sensoriales, al integrar los cinco sentidos en el marketing digital y tres, difíciles de replicar en internet (olfato, tacto y gusto). Esta tesis amplía la literatura del marketing sensorial con estímulos sensoriales menos estudiados (por ejemplo, emojis, sonidos asociados al producto, voz en *off* y palabras sensoriales). La teoría sensorial cognitiva (Hill, 2003) se extiende a los estímulos sensoriales en el marketing digital

porque este tipo de estímulos pueden crear percepciones e influir cognitivamente, lo que lleva a respuestas conductuales como abrir, hacer clic, me gusta, comentar, guardar o responder (*customer engagement*). Los estímulos sensoriales brindan evidencia para sustentar el modelo de elaboración de probabilidad (ELM por sus siglas en inglés) (Petty y Cacioppo, 1986), ya que los estímulos sensoriales podrían ayudar a los clientes desatentos o menos motivados a tomar decisiones aumentando su compromiso, ya que son un elemento periférico que dirige la atención del consumidor e influye en su respuesta (compromiso).

La literatura se amplía con el modelo S-O-R (Mehrabian y Russell, 1974). Analizando los incentivos sensoriales en el marketing digital hay importantes estímulos (S) en el ambiente digital que provocan una evaluación (O) y por tanto una respuesta del consumidor (R) (*engagement*).

La base teórica para predecir los efectos de los estímulos visuales implica la teoría de la retórica visual (Scott, 1994). Los emojis son un lenguaje visual y retórico que se utiliza para transmitir un significado, persuadir, generar respuestas positivas y aumentar la participación del cliente. También se amplía la literatura de imágenes mentales transmodales (Spence y Deroy, 2013), al integrar palabras sensoriales como estímulos que pueden llevar a imaginar las sensaciones de los productos sin tenerlos físicamente. También amplía la imaginería mental multimodal, integrando palabras sensoriales como elementos perceptuales que se pueden utilizar para completar funciones faltantes a través de internet y lograr recreaciones basadas en experiencias pasadas, que influyen en las decisiones de los clientes.

Otra aportación teórica consiste en la importancia de incluir variables moderadoras a la hora de predecir los efectos de los estímulos sensoriales. Dichas variables son necesarias para aclarar cómo funcionan dichos estímulos, por lo que su inclusión puede conducir a análisis más precisos de sus consecuencias para el compromiso del cliente. Las variables moderadoras en esta tesis han sido menos exploradas (tipo de emoji, repetición, posición, implicación y NFT), por lo que representa una aportación teórica novedosa.

Esta tesis propone una métrica congruente y completa del compromiso del consumidor. Esta medida combinada compromiso en campañas de marketing por correo electrónico, publicidad en redes sociales y respuesta no conductual del cliente (experiencia sensorial, acercamiento-evitación y respuesta emocional). Esto puede agregar nuevos matices a los análisis conceptuales y prácticos del compromiso del consumidor.

Un aporte importante de la tesis es la definición de palabras sensoriales, ya que la literatura previa sobre estos términos está enfocada a etiquetas, términos o enfocada al campo de la alimentación. Este estudio amplía los conocimientos sobre la eficacia de los estímulos sensoriales en el compromiso del consumidor yendo más allá de las redes sociales, integrando canales digitales menos explorados, como correos electrónicos y blogs.

Implicaciones prácticas

En entornos de negocios digitales, las marcas buscan competir mediante el establecimiento de una estrategia de marketing que brinde una experiencia atractiva para el cliente y evoque su interacción o compromiso con la marca. Los estímulos sensoriales pueden llevar a los gerentes a construir una experiencia de marca multisensorial exitosa, en lugar de relaciones de marca más conservadoras y limitadas, también a crear un diseño consciente de entornos web con efectos positivos en el cliente. Por lo tanto, el desafío para los minoristas de Internet de productos experienciales es cambiar el enfoque del uso de señales de compra a señales más experienciales (visuales, sonoras, olfativas, táctiles y gustativas). Si las personas asocian una experiencia positiva con estímulos sensoriales en el contenido digital, pueden seguir una reacción en cadena de actitudes e intenciones positivas que pueden ayudar a estimular el consumo por primera vez, alentar las ventas repetidas, aumentar las compras y, en consecuencia, la rentabilidad. En resumen, una de las implicaciones gerenciales más importantes de esta investigación de tesis puede mejorar la comprensión del compromiso del cliente y las estrategias de marca para maximizar el retorno de la inversión en marketing (Vander Schee *et al.*, 2020) a través de estímulos sensoriales.

Además, los buscadores como Google pueden incluir estímulos sensoriales (emojis, sonidos o voz en off y palabras sensoriales) en su algoritmo de posicionamiento y como estrategia SEO (*Search Engine Optimization*) o SEM (*Search Engine Marketing*). En las mejores prácticas de SEO y SEM, los estímulos sensoriales podrían integrarse como un elemento relevante de la experiencia del usuario para mejorar el ranking de la página web o el compromiso del consumidor con los anuncios. Las plataformas de sitios web, las redes sociales y el software de gestión de clientes o contenido pueden promover el uso de estímulos sensoriales para mejorar el compromiso.

Las diferentes formas de medir el compromiso del consumidor en esta tesis brindan a las marcas, especialistas en marketing y agencias una amplia variedad de formas de medición, integrando respuestas conductuales y no conductuales.

Las implicaciones prácticas específicas para cada estímulo también se proporcionan a continuación.

Estímulos visuales

Los especialistas en marketing deben desarrollar activamente estrategias para usar emojis de manera adecuada. Los hallazgos del capítulo 2 sugieren que las marcas podrían desarrollar un "código emoji de marca" (Casado-Molina *et al.*, 2019), similar a un manual de marca, que especifica cuándo y cómo usar emojis específicos para vincularse con la marca. Tales pautas podrían ayudar a la marca a establecer un elemento de marca creativo, interactivo y reconocible, así como un estímulo único para impulsar la participación del cliente. Estos códigos deben reflejar la situación específica de cada marca según lo señalado por la variación en los resultados de la investigación. Por ejemplo, la elección del emoji a utilizar, la repetición y la posición. Es importante que las marcas también consideren el estilo de comunicación de la marca (Arya *et al.*, 2018) o el público objetivo (Bai *et al.*, 2019; Danesi, 2016).

Estímulos auditivos

La influencia de los estímulos auditivos en el compromiso del consumidor tiene implicaciones para las marcas a largo plazo, como la lealtad del cliente, las ventas, la rentabilidad de la marca (Lee *et al.*, 2018), pero para que los sonidos sean efectivos, los profesionales deben considerar varios aspectos. El sonido asociado al producto en redes sociales como Instagram, genera experiencia sensorial y respuesta de acercamiento, por lo tanto, si las marcas integran en el contenido sonido asociado a su producto o servicio, obtendrán una mejor respuesta por parte del consumidor cuando tengan baja motivación o atención. En los blogs, las marcas deberían integrar voz en *off* si quieren obtener un mejor resultado en la experiencia sensorial y la respuesta de acercamiento, pero para influir correctamente en la respuesta emocional, es necesario considerar el tipo de producto (De Keyzer *et al.*, 2017).). Por ello, es buena idea que las marcas utilicen voz en *off* para mejorar

la respuesta emocional si sus productos o servicios son hedónicos (Barcelos *et al.*, 2018). Los sonidos pueden incluso reducir las intenciones de compra en contextos de alta implicación (Barcelos *et al.*, 2018), por lo que es recomendable utilizar estímulos auditivos cuando hay baja implicación. Una buena idea es usarlo en anuncios para aumentar el alcance y el conocimiento de la marca.

Estímulos olfativos, táctiles y gustativos

Las palabras sensoriales también proporcionan aportes para las marcas. Las estrategias de escritura de experiencia de usuario (UX por sus siglas en inglés) se benefician al agregar este tipo de palabras en el contenido en línea para mejorar la experiencia del usuario en sitios web, aplicaciones, redes sociales u otros productos o servicios digitales.

Específicamente, las palabras sensoriales hapticas brindan contribuciones gerenciales para los minoristas con "ladrillos y clics" porque las palabras sensoriales hapticas relacionadas con el tacto pueden ser una estrategia de acercamiento en el canal en línea que los motive a realizar sus compras físicas. De esta manera, podría sincronizar ambos canales, o por el contrario, en una tienda física ofrecer todos los estímulos sensoriales posibles con el tacto y resaltar esa experiencia de contacto en canales digitales con palabras sensoriales hapticas y otro tipo de interfaces digitales.

Los diferentes niveles de necesidad de tocar y tipo de clientes brindan información para que las marcas creen estrategias sensoriales diferenciadas para cada grupo. Ofrecer publicidad o experiencias de contacto físico a aquellos con alto nivel de necesidad de tocar y mejorar las estrategias digitales para aquellos con baja necesidad de contacto.

Limitaciones y futuras líneas de investigación

Esta investigación demuestra empíricamente que los estímulos sensoriales mejoran el compromiso del consumidor, pero existen limitaciones. En esta sección, discutimos las limitaciones comunes y proponemos más investigaciones para extender los resultados de la tesis.

Los estudios futuros podrían abordar variables no incluidas en la investigación actual, como diferentes segmentos de marketing (jóvenes o adultos mayores, B2C (empresa a consumidor) o B2B (empresa a empresa)); el medio utilizado (correo electrónico, comercio

electrónico, sitios web, aplicaciones, TikTok, Facebook y LinkedIn); tipo de contenido (ventas, promociones, códigos e información); sistema operativo (iOS y Android), tipo de producto (desagradable, categorías, familiaridad con el producto, servicios) o dispositivo (computadora, móvil y tableta). Se necesita más investigación para fortalecer los hallazgos de esta tesis con respecto a las diferentes variables moderadoras.

Diferentes señales pueden tener prioridad en la evaluación del producto según cómo se presenten esas señales y la calidad de la información transmitida (Citrin *et al.*, 2003). Por lo tanto, es importante probar previamente los estímulos sensoriales en futuras investigaciones. En esta tesis no se llevó a cabo. La investigación utilizó únicamente referencias de la literatura previa, características sensoriales de cada producto y se trabajó con las preferencias de las marcas que colaboraron en cada estudio.

Hay algunas variables moderadoras en esta tesis que no son significativas o muestran resultados contrarios a los esperados. Se recomienda más investigación para este tipo de variable, para ayudar a comprender mejor el impacto del rol moderador.

En esta investigación se analiza cada uno de los sentidos de forma independiente y su influencia en el compromiso del consumidor, pero se pueden integrar otras variables, como la interacción entre los sentidos (gusto y olfato), o variables dependientes como la actitud hacia la marca, la memoria, la valoración, ventas, etc. Por lo tanto, se pueden investigar señales multisensoriales (imagen, sonido, palabras sensoriales, etc.), que pueden ser superiores para influir en el comportamiento de los consumidores en comparación con el uso de una sola señal sensorial.

El compromiso del consumidor se centró principalmente en el compromiso positivo, por lo tanto, se necesitan estudios futuros para incorporar las nociones de expresiones de valencia tanto positivas como negativas del compromiso del consumidor.

La investigación adicional debería integrar el análisis de contenido y las herramientas de neuromarketing para proporcionar información más detallada. Finalmente, es importante considerar la ética de incluir estímulos sensoriales en las estrategias de marketing para persuadir a los clientes e influir en sus decisiones.

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