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SOUND BRANDING: THE EFFECT OF SONIC IDENTITY ON CONSUMERS' BRAND PERCEPTION

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Abstract

In a world where we are continually exposed to too many different stimuli at once, the power of sound remains an untapped branding resource. This research dives deep into the realm of sound branding, revealing the captivating influence of sound logos on consumers' brand perception. With the increasing emphasis on audio branding strategies, understanding the power of sound logos has become crucial in branding research. By delving into the field of sonic identities, and specifically of sound logos, this study uncovers their unique contributions and hidden potential to build emotional connections and leave a lasting imprint on consumers' minds. Drawing on aesthetic theory, multimodality, and brand familiarity research, we explore the intricate relationship between sound logo usage and consumers' responses to brand stimuli. This research unlocks valuable insights for brand managers, marketing practitioners and other stakeholders in the industry. Findings contribute to the existing knowledge of sound branding and shed the light on the strategic implementation of sonic identities as a powerful branding tool to create memorable and impactful brand experiences.

CHAPTER 1

Introduction

Sound branding is the set of audio logo, claim sound, commercial song, jingle, brand song, brand voice, or product sound (Barrio Fraile et al., 2021). It is an emergent and multidisciplinary discipline in marketing research, that involves both psychology and neuroscience to exploit sounds' effects on people's emotions and memory, but also music composition and technology to create distinctive and memorable sounds. It's about disrupting the power of sound and music to build strong connections and associations between brands and their customers (Barrio Fraile et al., 2021). Sound branding is an element of corporate identity (Jackson, 2003), and within it, the sound logo (also called audio logo, sonic logo, or *sogo*) is the instrument that might help customers to recognize the brand faster, as it has a mnemonic purpose (Nufer & Moser, 2018).

In today's fast-paced and highly competitive business world, it has become increasingly important for companies to differentiate themselves from their competitors. As technology has advanced, the importance of multimodality in branding has become more apparent, as consumers are exposed to an ever-increasing amount of audio-visual contents, particularly through mobile devices and voice assistants. This has led many companies to recognize the importance of implementing sound to create a memorable and distinctive brand identity. For example, Mastercard recently introduced a new sonic logo, and Intel's iconic five-note jingle is one of the most recognized in the world; even more, the most famous *Ta-Dum* of Netflix, or the Metro-Goldwyn-Mayer's lion roar. Moreover, as consumers' attention spans have decreased, and it has become more challenging to capture their attention through visuals alone, the use of sound has become more necessary. Nonetheless, the use of sound also allows companies to create a stronger emotional connection and a more engaging experience for consumers, having the power to evoke emotions and memories in a way that visual branding cannot, often on a subconscious level.

As such, despite the many benefits of sound branding, it is still a relatively new field, and there is a lot that we don't know yet about its effectiveness. This is where research comes in: by studying the impact of sound branding on consumers' brand perception, we can gain a better understanding of how and why it works and identify best practices or potential pitfalls. Specifically, the present research aims at demonstrating that sound logos usage can reinforce brand perception and create a bond with customers, giving back better results than visual identities alone.

Existing literature has mainly put attention on sound branding's role when talking about in-store atmospheric music and songs or jingles in advertising. On the other hand, when talking about sonic identity, previous research has emphasized the role of specific sound logos' characteristics (e.g., pitch, intensity, and speed (Mas et al., 2020); timbre (Melzner & Raghubir, 2023); ruggedness and sophistication (Puligadda & VanBergen, 2022)), and has always considered it alone. Therefore, despite it is already a flourishing stream of research, no study has analyzed the general effect of using (versus non-using) sound logos in branding. Also, the sound logo usage has been considered neither from an aesthetic theory point of view, nor in terms of multimodality.

Building up on present research, which considers sound as a great asset for brand recognition and values' transmission potentiality (Ballouli and Heere, 2015; Gustafsson, 2015; Moosmayer and Melan, 2010; Zander, 2006), we will explore the extent to which it can be a powerful tool in enhancing positive consumers' brand perception. Therefore, music in marketing is appreciated to be an emotional trigger that bypasses rational barriers and influences consumer choice and behaviour (Arning & Gordon, 2006). Also, according to Hagtvedt (2022), the auditory sense has the capability to drive marketing performance because of its aesthetic impact, that becomes a key differentiator between brands. Nonetheless, the interplay between different senses (e.g., vision and hearing) contribute to the aesthetic impact (Hagtvedt, 2022) and to learning and memory processes (Grewal et al., 2021; Tavassoli, 1998). As most digital communication is multimodal, it is crucial to understand how this multimodality affects consumers' perception and captures their preferences (Grewal et al., 2022), given the benefits in recognition when visual and auditory stimuli are presented simultaneously (Vroomen and De Gelder, 2000). As such, the present research aims at making three substantial contributions.

First, we explore the field of audio branding, shedding the light on the role of sonic identities in influencing consumers' brand perception. We aim at making a substantive and theoretical contribution by demonstrating, specifically, that sound logo's usage, alone or in conjunction with visual logo, can have positive effects on it. Nonetheless, despite having been recently arised as "must have" for brands and customer experiences (Arbeeny, 2021), the use of audio logo in branding strategies has been investigated little. Accordingly, we delineate the direct and indirect effect of sound on branding, highlighting the differences in brand perception results in comparison with visual logos solo usage.

Second, sound logos are not mere brand elements to be considered on their own. Conversely, it is just a part of the comprehensive branding strategy. Accordingly, instead of focusing on some aspects of a sound logo, we analyze it under an aesthetic theory and multimodality point of view. Hence, by investigating sound logos' results in terms of brand perception, we should then be able to demonstrate its appeal on primary mechanisms and on emotional stimuli, and therefore that it has aesthetic impact (Hagtvedt, 2022). Also, comparing results of visual and sonic logos alone with their interplay, we extend the knowledge on multimodality effect on consumers' brand perception (Grewal et al., 2022).

Finally, the present research provides practical insights on the relevance of sonic identities and, specifically, on the usage of sound logos to several audio branding stakeholders. Among them, brand managers can elicit evidence of the importance of implementing sound in their branding strategy. Moreover, they gain understanding on the interplay between brands' visual and sound identity in their communication. Lastly, the data on sound branding and brand perception relationship provide evidence of sonic logo's implementation effectiveness and, therefore, of the goodness and value of investing on it.

CHAPTER 2

Literature Review

A brand consists of the set of elements stemming from the associative knowledge network in consumers' memory, that positions a company in their mind (Keller, 1993). According to Krishnan et al. (2012), auditory information associated with the brand should be part of this knowledge. Hence, the concept of sound branding is formed as the strategic use of sound to communicate the identity and values of a brand (Groves, 2007; Jackson, 2003; Krishnan, Kellaris & Aurand, 2012).

Sound branding consists of the processes to use sounds continuously and consistently in relation with brands (Graakjær & Bonde, 2018). It captures auditory expression of a brand's identity, serving as a differentiation element from competitors (Khamis & Keogh, 2021), leading to an enhanced brand awareness and customer loyalty, and creating an emotional connection with a brand (Nufer & Moser, 2018). Indeed, using sound elements is considered a promising direction in the development of branding strategies (Gustafsson, 2019), since it has been evidenced how it can influence consumers (Graakjær, 2013) and brand attitude (Park and Young, 1986).

Coherently with the insight from the European advertising market for which audio advertising is the fastest-growing segment (Knapp, 2019), marketers are now facing the need of developing audio contests that are recognizable, memorable, and positively perceived by consumers (Gustafsson, 2015). To this extent, sound branding can be a strategic tool for marketers (Kilian, 2009), that exploit sound elements to convey brand values, meet consumers' cognitive and emotional processing (Vorster, 2015) and transmit brand attitudes (Argo, Popa & Smith, 2010; Bonde & Hansen, 2013). Hence, audio branding comes out to be an integral and very important part of corporate identity (Jackson, 2003), giving meaning and recognition to the brand (Barbeito Veloso et al., 2019), and to its values (Barrio Fraile et al., 2021).

Whilst not always emphasized, Deaville et al. (2021) highlighted the incredible strength of sound as something that cannot be avoided, as long as "whereas an audience can close their eyes, they cannot shut their ears" (Chang & Chang, 2013). Here the surge interest in sonic branding comes in, attracting the brands investments in sonic identities and sensory experience design (Arbeeny, 2021; Graakjær & Jantzen, 2009), and making sound be considered in the comprehensive building of a brand (Barrio Fraile et al., 2021).

As defined by the Audio Branding Academy (2019), sound branding is "the process of brand development and brand management by use of audible elements within the framework of brand communication", thanks to the creation of a consistent sonic identity as a configuration of "familiarity, liking, recognition, and personality" (Deaville et al., 2021). This process implies the use of various sound elements (Zotova & Pakhalov, 2020), like a sound logo, a brand song, or a brand voice' (Jackson, 2004; Bronner and Hirt, 2009). Among them, sound logo and brand song appear to be the most strategical elements to accompany the brand over years (Barrio Fraile et al., 2021), with the first one having recently received greater attention in the empirical literature (Krishnan et al., 2012).

Indeed, sound logos are defined as short musical note sequences that are part of brand's identity (Scott et al., 2022; McCusker, 1997), not lasting more than six seconds (Deaville et al., 2021). It is the auditory equivalent of visual logos (Graakjær & Bonde, 2018; Puligadda & VanBergen, 2022), playing the role of enhancing brand familiarity, recognition, and memory (Deaville et al., 2021; Wazir and Wazir, 2015), and coalescing brand attitudes and values (Ballouli and Heere, 2015). On the other hand, to be effective and successful, audio logos should be unique, memorable and recognizable (Anzenbacher, 2012), and have the ability to create better experiences and impressions than visual logos (Lusensky, 2010). Even more, sonic logos are the "voice" of the brand, through which it can be differentiated from its competitors (Scott et al., 2022), exploiting variations in design characteristics to establish awareness and communicate personality (Deaville et al., 2021).

To this extent, the process of brand sonification (i.e., building a sonic identity of the brand) aims at conveying brand information or corporate values to consumers (Krishnan et al., 2012), and, arguably, building the brand's identity, raising the brand's recognition, and transmitting emotions (Mas et al., 2020). Therefore, sound can also serve to communicate brand's narrative (Khamis & Keogh, 2021). And, nonetheless, Tom (1990) stated that original music in advertising (i.e., sonic identity) is more effective in being remembered compared to hit songs usage. Accordingly, the inclusion of sonic semiotics in creative development processes is considered as a must, for its capability to bring rational clarity to emotional fog (Arning & Gordon, 2006).

The achievement of all these results, including consistency with brand personality, is contingent on the fact that "brands should strategically design their sonic logos according to the acoustic patterns of sound. The use of simple, ordinary, and down-to-earth patters can elicit recognition of the sonic logo" (Mas, 2019). Further, sound branding strategies should

exploit the capacity of music to prompt emotions and enhance memory in advertising (Alpert et al., 2005; Dubé et al., 1995; Lantos & Craton, 2012). Hence, companies can take advantage of sonic branding strategically (Treasure, 2007), with the scope of increasing consumer loyalty (Fulberg, 2003), and using the music to tell the story of the brand (Westermann, 2008).

According to Arbeeny (2021), loyalty delivers more authentic and quality experiences. But loyalty itself is, in turn, driven by emotional connections. And these last are enhanced by sound, which has the ability to forge bonds between company and consumers. The auditory system, contrarily to the visual one, is physically located close to the parts of the brain regulating feelings and emotions (DeMarcio, 2006). Hence, music and sound are a language that consumers already know, housed deep in the emotional part of the brain and so easy to recall and remember, that can shape experience, memories, and moods (Arbeeny, 2021). Therefore, researchers have demonstrated that attitude emotionality infers how much someone likes something (Berger et al. 2021). Emotion is a primary basis of attitudes (Smith, 1947), and conveys word of mouth and consumer behavior (Berger, 2011; Berger & Milkman, 2012; Lavine et al., 1998; Rocklage & Luttrell, 2021).

"People do not always necessarily know and cannot always report accurately how they are reacting to music. Sometimes some of those processes are not available cognitively" (North, 2004). It is common knowledge that everyone thinking can follow one of two different mental systems (Kahneman & Frederick, 2002; Stanovich & West, 2000): on one side there is *system 1*, quick, automatic, and intuitive; on the other side there is *system 2*, more analytical and effortful. When people have to judge or decide quickly, they tend to rely more on *system 1*, thus on emotions (Rocklage & Fazio, 2015); and sound drives emotions.

Sound's processing facilitates the appetitive and aversive motivation systems activation (Lang, 2009). Consequently, sound can affect consumers instantly and, therefore, play a principal role in marketing and communication strategies and tools (Gustafsson, 2015; Mas, 2019). Through emotions triggered in consumers, sound logos are expected to strengthen brand attitudes and perception (Scott et al., 2022).

According to Arbeeny (2021), sound branding consists of the strategic development of a consistent, authentic sound experience of a brand. On the other hand, as previously highlighted, the role of sound in brand communication is below the level of consciousness, thereby consumers are not able to respond articulately to sound as they are to visual (Arning

& Gordon, 2006). To this extent, an important feature of audio logos should be the coherence with the visual logos, so that their pairing is effective and can have similar effects on brand personality perceptions (Puligadda & VanBergen, 2022). Hence, the mnemonic purpose of sound should also be exploited to help consumers recognize brand faster, while using them in connection with visual brand logo (Nufer & Moser, 2018). Nevertheless, as long as also visual logos can influence consumer judgements (Jiang et al., 2015), there is space for the risk of a simple duplication on each other between audio branding and visual branding (Sadoff, 2004).

The most problematic issue fronted by marketeers and communication experts is grabbing the attention of their audience. Its nature has, indeed, shifted over time, with more than half of consumer language research that put attention on how to persuade and impact consumers (Packard & Berger, 2024). Here it comes the necessity to mix up a variety of visual and acoustic features in communication and advertisings. In this respect, despite being less adept at conveying specific information, sound has an incredible potential at grabbing attention and increasing the liking of advertising (Branthwaite and Ware, 1997). Moreover, despite the dominance of visual processing (Colavita, 1974), sound can shape its perception (Boltz, 2001, 2004; Tan et al., 2013).

The use of sonic branding is also part of the Kotler's (1974) "marketing of the senses" (Hultén et al, 2008; Krishna, 2013). Despite being challenging to make a brand be heard and understood in environment where customers are bombarded with multiple stimuli (Nufer & Moser, 2018), sound branding has the capability to make the brand consistent independently of where consumers encounter it (Jackson, 2003). Indeed, brand identity is a multimodal and interdisciplinary area. Sound and visual elements can communicate brand features and values, providing information and shaping perception (Barrio Fraile et al., 2021). A brand is an associative knowledge network of ideas and concepts (Keller, 1993), nourished by sensorial stimuli that play a pivotal role in influencing the digestion of them, and the subsequent perception and attitude towards the brand itself (Deaville et al., 2021).

Among the stimuli that can provoke positive association with a brand, sound can "affect us emotionally and increase brand recognition, oftentimes beyond our awareness and our field of action" (Kilian, 2009), without being consciously perceived by consumers (Gustafsson, 2015). Puligadda & VanBergen (2022) provided initial evidence that these effects occur through a combination of conceptual and visceral pathways, and revealed that sound logos and visual logos can have similar effects on brand personality perceptions.

Of course, every possible effort and investment in sound branding strategy need to have as first objective making the brand sonic identity and the brand sound logo recognizable (Mas et al., 2020), otherwise it cannot work properly. Arguably sound has a great potential under this point of view (Ballouli and Heere, 2015; Gustafsson, 2015; Moosmayer and Melan, 2010; Zander, 2006). Therefore, when unfamiliar with a brand, consumers lack the mental framework needed to interpretate the stimulus (Morgan et al., 2021). In this regard, be familiar with the brand (and its identity elements) can increase the ease of processing and, thus, their liking, while unfamiliarity can have opposite effect (Lee & Labroo, 2004).

CHAPTER 3

Hypotheses Development

Brand personality consists of the combination of emotional and physical factors which are responsible for differentiating a brand from its competitors and make it and its products desirable (Aaker, 1997). Therefore, brand's personality perception comes out to be so critical for a company's success (Aaker, 1997; Plummer, 2000). To this extent, investigating the specific role of sound logo's usage in the creation of a positive consumers' brand perception becomes incredibly important for companies to understand how it can contribute to their branding strategies' success. Sound logos have been used for a long time, and there is a growing consciousness of the sonic identity development value from marketing professionals (AMP Sound Branding, 2022). As evidence of this, *Best Audio Brands 2022* ranked 250 of the world's leading brands, marking a big jump from the 100 brands analyzed the previous year.

On the other hand, despite the extensive usage of sound logos as a strategic branding element across a variety of mediums, the impact of sound logo's usage on consumer brand perception is still largely unexplored (Scott et al., 2020; Zotova & Pakhalov, 2020). Indeed, there has been a flourishing stream of research on sound logos characteristics and their different impact on brand personality perception, but there is still a surprising lack in the research on mere sound logos's usage impact. It could be mainly for this reason that there is a great effort put in the visual identity, while the same effort is not put in the sonic identity (AMP Sound Branding, 2022). And this leads brands to own custom music, but not recognizing the importance of transforming it into something that fits brand personality (AMP Sound Branding, 2022), and that participate in building their brand identity while positively affecting its perception.

The present research aims to provide a comprehensive interpretational framework for understanding and implementing sonic identity in companies' branding strategies. It is widely acknowledged that sensorial stimuli can drive and influence the brand perception of consumers. While visual stimuli tend to be interpreted at a rational level, sound stimuli rely more on the emotional bond of our minds. As such, sound has the potential to affect the perception of consumers at a subconscious level. In particular, it has been shown to have a powerful emotional impact, as it can invoke memories and feelings that are able to affect consumers instantly (Fulberg, 2003; Jackson, 2003; Kilian, 2009), because of its ability to elicit emotional responses and create associations between brands and positive feelings.

Accordingly, we first hypothesize that the usage of a sound logo will have a significant impact on consumers' perception of the brand. We predict that the incorporation of a sound logo into a company's branding strategy may result in improved brand perceptions. More formally, we present our first hypothesis:

> **H1:** The usage of sound logos drives companies' brand identity and creates an emotional bond able to convey a positive consumer's brand perception.

The use of sound in branding strategies also contributes to create a multisensory experience that engages consumers on multiple levels. When sound and visual elements are used in combination, they can enhance each other's aesthetic impact (Hagtvedt, 2022), and create greater integration in memory (Grewal et al., 2021). Also, their joint usage can create a more compelling and impactful brand identity and obtain a greater effect on consumers' overall brand perception. This is because sound and visual elements are processed differently in the brain and are likely to have separate effects on consumers' experiences (Grewal et al., 2022), probably because of their different way of interpretation. Thereby, their joint effect becomes a critical question, since multimodal communication affects consumers' perceptions and attitudes (Grewal et al., 2022). By understanding the potentiality of their combined impact, companies can create more effective and engaging branding strategies that resonate with their target audience.

Our second hypothesis aims to understand the impact of multimodal communication in branding strategies, specifically the combined influence of visual and sound logos. We seek to explore the potential effects of these two sensory building blocks on consumers' perceptions and attitudes towards a brand. Formally:

> **H2:** The interplay between sound logo and visual logo moderates the effect of sound logo on consumers' brand perception.

Consumers' ability to understand and interpret information about a brand evolves over time, as they gain more knowledge and experience with the brand (Heilman et al., 2000). This means that consumers expect logos to effectively convey information in a way that is easy for them to understand (Henderson & Cote, 1998; Janiszewski & Meyvis, 2001). However, the degree of ease with which logos can be processed depends on consumers' level of familiarity with the brand. If consumers lack knowledge about a brand, they will lack the necessary context to correctly process logos (Morgan et al., 2021). According to Barry & Howard (1990), consumers follow a fixed order when processing marketing information,

starting with cognitive processing, followed by affective processing, and ending with conative processing. This means that consumers rely on one of these three systems depending on their prior knowledge and familiarity with the brand. Therefore, brands need to create logos that are easy to understand for both familiar and unfamiliar consumers to effectively communicate their message and create a positive brand perception.

Our third, and last, hypothesis aims to consider the importance of prior knowledge and brand familiarity on consumers' processing of logos, which ultimately affects their perception of the brand. In other words, we posit that there is a significant relationship between consumers' brand familiarity and their ability to process logos, and this relationship is reflected in their overall brand perception. This hypothesis is crucial for understanding the influence of brand familiarity on consumers' brand perception triggered by different logos. Therefore, we formulate the following hypothesis:

H3: Brand familiarity mediates the main effect on consumer brand perception.

Based on the three aforementioned hypotheses, a conceptual framework has been built to provide an overview of the research and the subsequent study. The framework highlights the importance of sound logos in branding strategies and the joint effect of audio and visual elements on consumer perceptions. The first hypothesis posits that sound logos have a direct impact on consumers' brand perception. The second hypothesis emphasizes the importance of the interplay between visual and sound logos. Lastly, the third hypothesis takes into account the role of brand familiarity in consumers' ability to process logos and their subsequent impact on brand perception. The conceptual framework provides a clear and structured visualization of the research and serves as a guide for the study which follows.

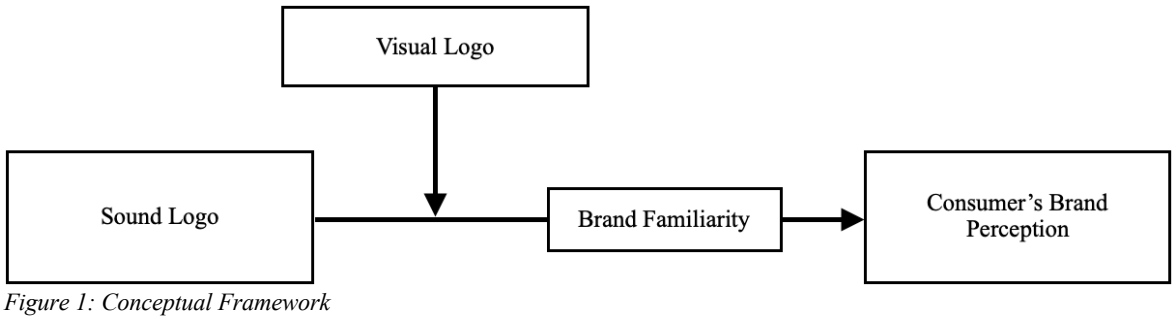

Figure 1: Conceptual Framework

CHAPTER 4

Method

To test the three aforementioned hypotheses and to examine the effect of the usage of sonic identities (and sonic logos specifically) on the consumers perception of brands, the present research employed a survey design to collect data from participants. The sample consisted of 339 participants recruited using convenience sampling via social media, email, and word of mouth. The average age of participants was 33.83 (SD=14.96). The sample was composed for the 61% by female participants, and for the 39% by male participants. Italians were 92% of the sample.

The study employed a self-administered questionnaire, which was divided into two sections. The first section collected demographic information from the participants, including age, gender, nationality, and education level. The second section assessed participants' familiarity and perception of five brands, namely HSBC, T-Mobile, LG, Audi, and Netflix, employing their brand logos. Specifically, the choice fell on these five brands mainly for 3 reasons: (1) they are differently positioned across the whole Best Audio Brands ranking (AMP Sound Branding, 2022); (2) their logo characteristics were similar; and (3) they are assumed to have different degrees of familiarity across the author's attainable sample. In particular, the second characteristic used to select brands was very important to prevent biases in the between-groups analysis, that is, it was necessary to present participants to the most similar condition for each brand: sound logos' length is between 3 and 4 seconds, while visual logos had at least an image-based part in the logo that has been used as a stimulus, in order to prevent that brand recognition was sparked only by reading the brand name (i.e., through the text-based part of the logo).

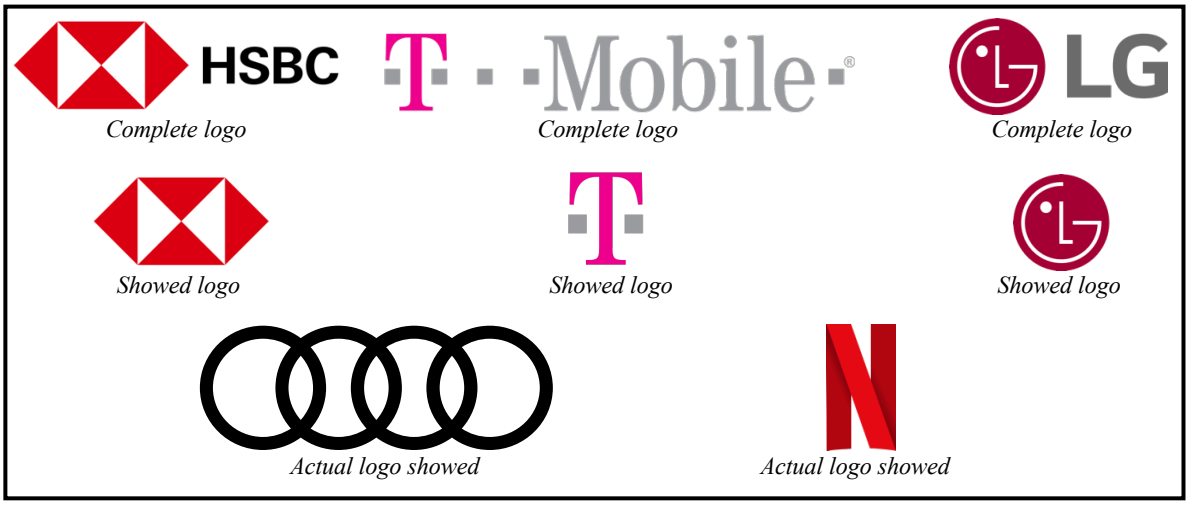

Figure 2: Visual logos showed to participants

Further, brand familiarity is rated by respondents on a 10-point scale, assuming that ratings from 1 to 4 mean low brand familiarity, 5-6 are considered neutral, and ratings from 7 to 10 imply a high brand familiarity. On the other hand, brand perception is measured along ten dimensions in accordance with Aaker (1997), on a 5-point Likert scale (where 1=strongly disagree, and 5=strongly agree). The ten perception dimensions were: quality, reliability, innovativeness, exclusivity, uniqueness, friendliness, worthy, professionality, diversity, and needs satisfier. The consumer perception of brands was measured through statements such as "It is a high-quality brand", "It is reliable", "It satisfies my needs". Moreover, three versions of the logos were presented: sound logo, visual logo, or multimodal logo (i.e., sound and visual logo combined).

Therefore, three different experimental conditions were created: one featuring sonic logos, one featuring visual logos, and the last one featuring their combination. In addition, the five different brands were meant to create for each participant different familiarity conditions: namely, the brand familiarity should be increasing along the five brands. Hence, the study followed a 3x3 conditions study design, based on brand familiarity and stimulus exposure, as showed in the table below.

		Stimulus exposure		
		Sound Logo	Visual Logo	Multimodal Logo
Brand familiarity	Low			
	Neutral			
	Middle			

Table 1: Study design

At the beginning of the survey, each participant was randomly selected to be in one of the three treatment groups (the sound logo group, the visual logo group [control], and the multimodal logo group) through a simple randomization. The sound logo condition assessed the effect of sound logos alone on consumer brand perception; the multimodal logo condition assessed the combined effect of sound logos and visual logos; while the visual logo condition served as control condition to compare results. Brand familiarity assessed the mediation effect on consumers' brand perception.

The questionnaire contained two presenting randomizations to prevent "*automatic responses*" and, consequently biases in the research. Specifically, the five brands were randomly presented to participants in a completely casual order, to avoid that the increasing expected familiarity was obvious. Further, the dimensions for brand perception measurement

were presented in a random order to each participant and for each evaluated brand, as such respondents had to focus on each question every time and give conscious responses.

Data collected from the questionnaire was analyzed using descriptive statistics to outline the characteristics of the sample and the distribution of the data. Analyses of variances were employed to test the three hypotheses outlined in the introduction. Further evidence of ANOVA results was provided by univariate analyses of variances, logistic regressions, and correlation analyses. Due to the structure of dataset, analyses accounting for brand familiarity were computed separately on each brand, not being possible to categorize data by brands. However, this had no impact on the obtained results.

The first hypothesis was tested by examining the relationship between the usage of sound logos and the creation of an emotional bond that conveys a positive consumer brand perception. The second hypothesis was tested by assessing whether the interplay between sound logo and visual logo moderates the effect of sound logo on consumer brand perception. The third hypothesis tested the mediating role of brand familiarity on consumer brand perception. The inclusion of brand familiarity as a mediator variable allowed for the examination of the extent to which consumer familiarity with the brand affects the relationship between sound logos and visual logos and consumer brand perception.

The study adhered to ethical principles regarding participant confidentiality, anonymity, and informed consent. Participants were informed about the purpose of the study, their rights as participants, and the procedures involved in the study. They were also assured of the confidentiality of their responses.

However, the use of convenience sampling, reliance on self-report measures, and focus on only five existent brands may limit the generalizability of the results. Furthermore, the study was conducted using a cross-sectional design, which limits the ability to establish causality between variables. Longitudinal studies that examine the effect of sonic identity on consumer brand perception over time may provide a more robust understanding of the relationship between these variables.

Despite these limitations, the study provides insights that helps understanding the effectiveness and the value of employing sonic identities in corporate branding strategies. Indeed, it shows the variation in brand familiarity and in brand perception for different logo versions. These findings may be of interest to marketers, brand managers, and other professionals involved in the creation and management of brand identity.

CHAPTER 5

Results

As this study focuses on the effect on consumers brand perception of implementing a sonic identity in the corporate branding strategy, the usage of different logos has been analyzed. In particular, we have studied how the perception of consumers varies whether they are exposed to a sound logo, to a visual logo, or to a multimodal logo (i.e., sound and visual logos together). As previously stated, the research survey has collected 339 responses, randomly assigned to one of the three logo condition as displayed in the table below.

Condition

		Frequency	Percentage	Cumulative %
Valid	Visual	129	38.1	38.1
	Sound	106	31.3	69.3
	Multimodal	104	30.7	100.0
	Total	339	100.0	

Table 2: Frequencies

Starting from our first hypothesis, for which the usage of sound logos should convey a positive consumer's brand perception, we run an ANOVA to see whether there is a difference in means between the three different conditions.

Descriptive Statistics

		Mean	Min	Max	Std. Dev.	Std. Error
HSBC	0	2.916	1.0	4.1	.6140	.0541
	1	2.976	1.0	4.4	.7070	.0687
	2	2.912	1.0	5.0	.7439	.0729
	Total	2.934	1.0	5.0	.6838	.0371
T-Mobile	0	2.994	1.0	4.7	.6212	.0547
	1	2.859	1.0	5.0	.7064	.0686
	2	2.929	1.0	5.0	.7631	.0748
	Total	2.932	1.0	5.0	.6940	.0377
LG	0	3.343	1.2	5.0	.6651	.0586
	1	3.177	1.0	5.0	.7001	.0680
	2	3.374	1.5	5.0	.6920	.0679
	Total	3.301	1.0	5.0	.6876	.0373
Audi	0	3.940	1.7	5.0	.6379	.0562
	1	3.364	1.0	5.0	.8105	.0787
	2	3.843	1.7	5.0	.6946	.0681
	Total	3.730	1.0	5.0	.7536	.0409
Netflix	0	3.712	1.0	5.0	.7350	.0647
	1	3.867	2.1	5.0	.7580	.0736
	2	3.838	1.0	5.0	.7138	.0700
	Total	3.799	1.0	5.0	.7370	.0400

Table 3: Descriptive Statistics – Logo Condition on Brand Perception

ANOVA

	Sum of squares	df	F	Sig.
HSBC	.279	2	.297	.743
T-Mobile	1.052	2	1.092	.337
LG	2.407	2	2.569	.078
Audi	21.186	2	20.842	<.001
Netflix	1.637	2	1.511	.222

Table 4: ANOVA Between Groups – Logo Condition on Brand Perception

The mean scores of brand perception across logo conditions give us some meaningful insights. First, generally speaking, we see that the second three brands achieve positive values (i.e., greater than 3) of brand perception across all the three different logo conditions, while the first two are slightly below the limit level. Further, to assess that there is an actual difference between perceptions triggered by different logo types, we look at the ANOVA table. Hence, we can see that only two brands out of five give back a p-value that makes the analysis statistically significant under a 90% confidence interval, which are LG and Audi. Therefore, a Bonferroni Post-Hoc test is provided on these two brands to evaluate the difference in means.

Bonferroni Post-Hoc

	(I) Condition	(J) Condition	Means difference (I-J)	Sig.
LG	0	1	.1661	.195
		2	-.0306	1.000
	1	0	-.1661	.195
		2	-.1967	.114
	2	0	.0306	1.000
		1	.1967	.114
Audi	0	1	.5754	<.001
		2	.0963	.919
	1	0	-.5754	<.001
		2	-.4791	<.001
	2	0	-.0963	.919
		1	.4791	<.001

Table 5: Bonferroni Post-Hoc test – Logo Condition on Brand Perception

While the means differences of the LG brand perception across logo conditions are not significant, Audi brand gives back a statistically significant difference between visual and sound logo conditions, and between sound and multimodal logo conditions. Specifically, the visual logo gives back a better perception than the sonic logo, as well as the multimodal one.

The condition (i.e., logo version) to which participants were exposed not only should have affected the brand perception, but further and foremost their brand familiarity. Indeed, familiarity with a brand triggered by its logo depends on our ability to retrieve the logo in our memory, which in turn depends on if and how much we have been exposed to it before.

ANOVA				
	Sum of squares	**df**	**F**	**Sig.**
HSBC	1.789	2	2.351	.097
T-Mobile	3.303	2	2.977	.052
LG	47.980	2	46.099	<.001
Audi	26.845	2	32.735	<.001
Netflix	2.060	2	5.018	.007

Table 6: ANOVA Between Groups – Logo Condition on Brand Familiarity

As the analysis of variances of brand familiarities among different conditions returns all significant values with a 90% of confidence interval, it is possible to ensure the presence of a difference in means between different logo exposures.

Brand familiarity is present in our research model as mediator of the relationship between the logo condition and the resulting brand perception. Therefore, we investigate also how brand perception varies along different levels of familiarity with the brand. All the results provide evidence that there is a difference in brand perception when familiarity varies; further, it results in a positive relationship between familiarity and perception.

ANOVA				
	Sum of squares	**df**	**F**	**Sig.**
HSBC	13.786	2	16.058	<.001
T-Mobile	10.920	2	12.078	<.001
LG	10.899	2	12.296	<.001
Audi	51.570	2	61.716	<.001
Netflix	17.251	2	17.421	<.001

Table 7: ANOVA Between Groups – Brand Familiarity on Brand Perception

Univariate Analyses of Variances further investigate the joint effect of both condition and brand familiarity on consumers' brand perception. While the first three brands, namely HSBC, T-Mobile and LG, do not show a statistical significance of the condition effect (i.e., p-value > 0.1), the other two result in having statistical significance (Audi: p-value = 0.009; Netflix: p-value = 0.063) under a 90% confidence interval. Both the Pairwise Comparisons of Estimated Marginal Means and the Bonferroni Post-Host test hereby confirm previous results for the Audi brand. Instead, the Pairwise Comparisons of Estimated Marginal Means for the logo condition of Netflix show only a significant difference between sound logo and visual logo condition in favor of the sound logo one; Bonferroni Post-Hoc test, instead, does not show any significant difference in means. On the other hand, all the five brands reports statistically significant results for the brand familiarity effect (p-value < 0.001). Furthermore, both Pairwise Comparisons of Estimated Marginal Means and Bonferroni Post-Host tests confirm the positive relationship between brand perception and brand familiarity, resulting in greater values of brand perception for increasing brand familiarity.

Additionally, we tested the mediation effect of brand familiarity on the relationship between logo type and brand perception. The results showed that the interaction effect appears to be significative, and the estimation of marginal means differs more from observed means. The edge case is represented by the LG brand, in which even the whole *ranking* between logo conditions changes completely. Therefore, brand familiarity partially mediated the effect of logo type on brand perception, with a significant indirect effect. This suggests that brand familiarity played a role in explaining the effect of logo type on brand perception.

A binary logistic regression analysis was conducted to further examine the impact of condition and familiarity on brand perception. The dataset was manipulated to recode perceptions into binary value: therefore, values ≤ 3,0 were recoded as 0 (indicating negative perception), while values > 3,0 as 1 (indicating positive perception). Results revealed that the coefficients associated with logo type were not statistically significant, whereas those associated with familiarity consistently showed statistical significance with p-values <0.001. Furthermore, the coefficients related to logo type demonstrated a relatively small impact on predicting brand perception. These findings provide further evidence of a strong mediating effect of familiarity on the relationship between logo type and brand perception.

A final check was conducted using a correlation analysis. The results revealed a very low, or even absent, correlation between logo condition and brand perception, which was consistently non-significant. In contrast, there was a strong and consistently significant correlation between familiarity and perception. These findings provide compelling evidence for a robust mediating effect of familiarity on the relationship between logo condition and brand perception.

Discussion

The conducted analysis has provided valuable insights into the relationship between logo type, familiarity, and brand perception. The initial focus was to examine the direct effects of variables, but results suggest a more nuanced and complex relationship.

Findings indicate the exposure to different logo types not having statistical significance when considering its effect on brand perception. This implies that the specific visual or auditory characteristics of logos did not have a direct and significant impact on brand perceptions, suggesting that factors beyond the logo itself may be driving perception. Conversely, brand familiarity yields statistically significant results when used to categorize responses and examine changes in brand perception at different levels of familiarity (low, neutral, high). Hence, familiarity plays a crucial role in shaping brand perception. Greater familiarity with a brand lead to a more positive perception of it. Familiarity acts as a lens to interpret and evaluate the brand, influencing their cognitive and emotional responses.

Supporting these findings, a univariate analysis including both factors confirm the lack of statistical significance between different logos. Moreover, an analysis on the interaction between condition and familiarity yields significant results, further confirming that logo condition assumes meaning only when intertwined with the effect of familiarity. A binary logistic regression upholds that the coefficient for logo type is not significant, while the coefficient for familiarity is. It is worth noting that the low coefficients associated with the logo condition indicate that the variation in logo type has minimal influence on brand perception, reinforcing the notion that familiarity plays a more substantial role.

Interestingly, our analysis revealed a low or negligible correlation between logo condition and brand perception, while a high and significant correlation between familiarity and brand perception. This suggests there may be additional unobserved factors which could explain the variance in brand perception beyond the influence of logo type and familiarity.

However, the effect on brand perception is presumed may be completely explained by the mediator in the model, making it difficult to discern the significance of logo type variation alone. Additionally, some respondents' testimonies of their tendency to opt for neutral responses when lacking brand knowledge, underscores the significance of familiarity in shaping brand perception. Thus, pre-existing brand knowledge and familiarity appear to have stronger influence on perception than exposure to specific types of logos.

To conclude, our analysis provides compelling evidence supporting the first hypothesis, which suggests that the usage of sound logos plays a significant role in driving positive brand perception and establishing an emotional bond with consumers. Our findings highlight that sound logos have a positive impact on consumer perceptions and contribute to creating a favorable brand image, especially when brand familiarity is high. Therefore, as stated before, low levels of brand familiarity negatively impact on brand perception, whatever the type of logo is.

Instead, our investigation did not yield support for the second hypothesis, which proposed that the interplay between sound and visual logos moderates the effect on brand perception. The lack of statistical significance in the differences observed across logo conditions indicates that visual elements may not significantly influence the impact of sound logos on consumer perceptions. In any case, not finding a statistically significant difference in means does not make it possible to confirm the hypothesis.

However, our findings strongly confirm the third hypothesis, emphasizing the pivotal mediating role of brand familiarity in shaping consumers' brand perception. The significant coefficients and consistent effects of familiarity highlight its importance in influencing consumers' cognitive and emotional responses to brands. Nonetheless, brand familiarity came out playing an even fundamental role in the acceptance of our first hypothesis, which is indeed confirmed under the requisite of high level of brand familiarity.

	Hypothesis	**Result**	**Comments**
H1	The usage of sound logos drives companies' brand identity and creates an emotional bond able to convey a positive consumer's brand perception.	confirmed	The analyses on brand perception for the different logo conditions demonstrates that sound logos always conveys positive perception when familiarity is high, and sometimes also for lower familiarity levels.
H2	The interplay between sound logo and visual logo moderates the effect of sound logo on consumers' brand perception.	not confirmed	Lack in statistical significance among logo conditions makes not possible to confirm the moderator effect of multimodality on brand perception.
H3	Brand familiarity mediates the main effect on consumer brand perception.	confirmed	All the analysis on brand familiarity lead to a 99.9% of significance of its effect on brand perception, also assuming a fundamental pivotal mediating role on logo condition.

Table 8: Summary of hypotheses results

CHAPTER 6

Theoretical and Managerial Implications

Our findings bring with them some valuable insights for both academic researchers and marketing practitioners. Specifically, this study contributes to the existing literature on branding, sensory marketing, and consumer behavior.

Firstly, our research extends the understanding of the role of sound logos in driving brand perception. By demonstrating the ability of sound logos to drive a positive consumer perception, we have provided empirical evidence to support the theoretical framework which emphasizes the sensory aspects of branding. In this regard, we highlight the need for marketers to consider sound as a powerful and strategical tool in brand communication, as it exploits music capability to evoke emotions (Arning & Gordon, 2006), establish brand identity (Jackson, 2003), and create a distinctive brand experience.

Additionally, our study contributes to the literature on multimodality (e.g., Grewal et al., 2022; Vroomen and De Gelder, 2000), by investigating the interplay between sound and visual logos. Even if our findings did not support the hypothesis of a moderating effect of logos interaction, we have still added nuance to the understanding of how sensory stimuli interact and influence consumer perceptions. Results suggests that the impact of sound logos on brand perception may not necessarily be contingent on the presence of visual stimuli. However, they encourage further exploration and refinement of theoretical models that account for the complex dynamics between different sensory cues in the branding context.

Moreover, the present study underscores the mediating role of brand familiarity in the relationship between logo types and brand perception (Morgan et al., 2021). The robustness of results on its mediating effect highlights the significance of familiarity as a key driver of brand perception. This, indeed, aligns with the literature on brand familiarity and supports the proposition that familiarity acts as a cognitive mechanism through which consumers process and interpret branding stimuli. Further, it suggests that marketers should prioritize and allocate resources and efforts in building brand familiarity as a fundamental aspect of brand management strategies. Hence, by cultivating brand familiarity, companies can establish a strong foundation for positive brand perception, build brand trust, and foster long-term customer loyalty, ultimately strengthening their brand equity.

From a managerial standpoint, our study offers practical insights for brand strategists and marketers. Among all, our findings underline the importance of integrating sound logos in their branding strategies. In accordance with previous research on sound logo design (e.g.,

Mas, 2019; Kim, 2020) marketers should implement sound logos, and more generally a sonic identity, that align with the brand identity and evoke desired responses. By leveraging the power of sound, companies can create a distinctive and memorable brand experience, heightening brand recognition and forging stronger connections with consumers. Nonetheless, by embracing these insights, brand managers can strengthen their brand positioning, engage with consumers on a deeper level, and this can lead them achieve greater success in the marketplace.

Limitations and Future Research

While our study has provided valuable insights into the impact of sound logos, multimodality, and brand familiarity on consumers' brand perception, there are several limitations that need to be considered. Nevertheless, these limitations present opportunities for future research to further advance the understanding of the complex dynamics between sensory marketing, multimodality, brand familiarity, and consumer perception.

Firstly, our study relied on the usage of existing brands, which implies the influence of participants' prior knowledge and experiences with those brands. The level of familiarity participants had with the brands used in our study may have influenced their responses. Therefore, future research could address this limitation by making use of fictional brands to prevent potential biases and preconceived notions associated with existing brands.

Furthermore, the lack of a double-check on participants' actual level of brand familiarity limits the reliability of its measure. As we used self-reported measures to assess brand familiarity, it would be beneficial to incorporate additional steps to verify participants' knowledge and familiarity with the brands. Objective measures, such as brand recall or recognition tasks, could provide a more accurate assessment of familiarity and its influence on brand perception.

When addressing the moderating role of multimodality, the interplay between sound and visual logos did not account for their coherence. Although we referenced several relevant papers on the characteristics of sound logos (Mas, 2019; Mas et al., 2020; Kim, 2020; Puligadda, 2022; Melzner, 2023), we did not specifically investigate the coherence between sound and visual elements. Future research could deploy this aspect, exploring how the congruence between sound and visual components in multimodal logos influence perception. This would provide a more comprehensive understanding of the role of multimodality in branding and its impact on consumer responses.

Additionally, the role of synesthesia warrants further investigation. Synesthetic experiences, where individuals perceive a sensory stimulus in a way that triggers an involuntary perception in another modality, could potentially influence how sound logos and visual logos are processed and integrated in brand perception. Exploring the relationship between synesthesia and brand perception would provide a unique perspective on the interplay of sensory cues in branding. Indeed, Graakjær & Bonde (2018) propose that

sound can be meant as a synesthetic accompaniment to visuals, and also the reverse could be true.

Further, future research could explore other promising areas of investigation. One potential direction is to explore the role of perceptual and conceptual fluency in interpreting different logos, which could differently shape consumer responses. Building on the work of Morgan et al. (2021), future studies could examine how the ease of processing and understanding different logo characteristics influence brand perception. Understanding the underlying cognitive mechanisms involved in sound and visual logos processing could provide valuable insights for designing effective branding strategies. Also, the multimodality effect of sound and visual stimuli could play a role in perceptual and conceptual fluency.

Finally, conducting the study in a controlled environment, such as an in-person experiment, could address some of the limitations associated with online surveys. By ensuring a standardized setting, researchers can have more control over potential confounding factors and environmental influences that may impact participants' responses. This would enhance the reliability and generalization of findings and provide a more robust basis for understanding the effects of sonic identities on brand perception.

To conclude, while the present research has shed light on the impact of sound logos, and some side effects on consumer brand perception, it is crucial to acknowledge the limitations and opportunities for future research. By addressing these limitations and exploring new avenues of inquiry, researchers can deepen our understanding of sensory branding and provide valuable insights to further expand the context of our study.

Conclusions

This thesis aims to draw attention to the field of audio branding, specifically by examining the effect of mere sound logo usage in influencing consumers' brand perception. The objective of the present study was to address three main contributions, and through our analysis, we have shed light on the importance of sonic identities in branding strategies and the interplay between sound and visual elements in shaping consumers' brand perception. Further, the role of brand familiarity has been addressed, contributing also to this stream of research.

Firstly, we have contributed to the understanding of the role of sonic identities in branding strategies, with a particular focus on audio logos. By investigating its direct effects on consumers brand perception, we have demonstrated sound logo potential to elicit positive responses and shape brand perceptions. Our findings align with the growing recognition of sound logos as a "must-have" element in contemporary branding strategies (Arbeeny, 2021). Indeed, we have highlighted the great contributions of sound logos in branding activities. While visual elements have traditionally received more attention in branding research, our study has revealed the distinct impact of sound logos on consumers' brand perception. By focusing on the sonic dimension of branding, we have filled a gap in the literature and emphasized the need to consider sound as a crucial component of a comprehensive branding strategy. Our research provides evidence of the effectiveness of sound logos and reinforces the importance of investing in audio branding initiatives.

Secondly, we have approached sound logos from an aesthetic theory and multimodality perspective. By investigating the aesthetic impact of sound logos and their interplay with visual elements, we have expanded the understanding of how different modalities contribute to consumers' brand perception. Aesthetic theories suggest that aesthetic experiences arise from the interaction between sensory stimuli and cognitive processes (Hagtvedt, 2022). Despite our findings did not demonstrate significant differences across modalities, the present study still highlighted the aesthetic appeal of sound logos and allowed us to explore the influence of multimodality in brand communication (Grewal et al., 2022), extending this knowledge to the field of sound branding.

Lastly, by including brand familiarity in the research framework, present research has contributed to deepen the understanding of its role in fostering brand management efforts. Specifically, our findings align with previous research by Morgan et al. (2021),

demonstrating the influence of brand familiarity on consumers' perception of a brand, and expand them to the stream of research on sound branding. Hence, this paper demonstrates the huge weight it has in mediating the impact of branding elements on the communication of brand identity and in shaping perceptions. Even, we prove that familiarity assumes such an importance to mediate the effect of the different types of logos to the point that their primary effect is not directly observable, without *using the lenses of the brand familiarity*. Indeed, we have not been able to confirm the moderating role of multimodality effect since the measurement of brand perception was strongly influenced by respondents' familiarity with the brand.

In conclusion, this thesis has contributed to the field of sound branding by examining the role of sound logos in influencing consumers' brand perception. Our findings emphasize the importance of sound logos as a key element in branding strategies and their unique contribution to shaping brand perception. We have expanded the understanding of the aesthetic impact and multimodal effects of sound logos on consumers' brand perception. The limitations of our study provide opportunities for future research to further explore the intricacies of audio branding, including the role of perceptual and conceptual fluency, synesthesia, and the replication of studies in controlled environments. These contributions advance our knowledge of audio branding and provide valuable insights for marketers, brand managers, and other stakeholders in the audio branding industry. By embracing the potential of sound logos and considering their synergistic effects with visual elements, brands can enhance their brand identity, create memorable experiences, and strengthen their connections with consumers.

References

Aaker, J. L. (1997). Dimensions of Brand Personality. *Journal of Marketing Research*, *34*(3), 347-356. https://doi.org/10.2307/3151897

Alpert, M. I., Alpert, J. I., & Maltz, E. N. (2005). Purchase occasion influence on the role of music in advertising. *Journal of Business Research*, *58*(3), 369-376. https://doi.org/10.1016/s0148-2963(03)00101-2

AMP Sound Branding. (2022). *Best audio brands 2022*. https://www.ampsoundbranding.com/best-audio-brands

Anzenbacher, C. (2012). Audiologos – Are there common rules for the design of a catchy melodic figure? *(((ABA))) Audio Branding Academy Yearbook 2011/2012*, 129-141. https://doi.org/10.5771/9783845236858-129

Arbeeny, A. (2021). Sonic branding: The value of intentional audio in the new normal. *Journal of Brand Strategy*, *10*(1), 14-25.

Argo, J. J., Popa, M., & Smith, M. C. (2010). The sound of brands. *Journal of Marketing*, *74*(4), 97-109. https://doi.org/10.1509/jmkg.74.4.97

Arning, C. (2006). Sonic Semiotics: The Role of Music in Marketing Communications. *ESOMAR Conference Proceedings*.

Audio Branding Academy. (2020, May 21). *What is audio branding?* ISA - International Sound Awards. Retrieved from https://www.international-sound-awards.com/knowledge/what-is-audio-branding/

Ballouli, K., & Heere, B. (2015). Sonic branding in sport: A model for communicating brand identity through musical fit. *Sport Management Review*, *18*(3), 321-330. https://doi.org/10.1016/j.smr.2014.03.001

Barbeito Veloso, M. L., Barrio Fraile, E., Enrique Jiménez, A. M., Fajula Payet, A. & Perona Páez, J. J. (2019). La marca que se escucha: estrategias sonoras en el branding de las instituciones. Madrid: Fragua, 55-71

Barrio Fraile, E., Enrique Jiménez, A. M., Barbeito Veloso, M. L., & Fajula Payet, A. (2021). Sonic identity and audio branding elements in Spanish radio advertising. *Anàlisi*, *65*, 103-119. https://doi.org/10.5565/rev/analisi.3330

Barry, T. E., & Howard, D. J. (1990). A review and critique of the hierarchy of effects in advertising. *International Journal of Advertising*, *9*(2), 121-135. https://doi.org/10.1080/02650487.1990.11107138

Berger, J. (2011). Arousal increases social transmission of information. *Psychological Science*, *22*(7), 891-893. https://doi.org/10.1177/0956797611413294

Berger, J., & Milkman, K. L. (2012). What makes online content viral? *Journal of Marketing Research*, *49*(2), 192-205. https://doi.org/10.1509/jmr.10.0353

Berger, J., Rocklage, M. D., & Packard, G. (2021). Expression modalities: How speaking versus writing shapes word of mouth. *Journal of Consumer Research*, *49*(3), 389-408. https://doi.org/10.1093/jcr/ucab076

Boltz, M. G. (2001). Musical Soundtracks as a schematic influence on the cognitive processing of filmed events. *Music Perception*, *18*(4), 427-454. https://doi.org/10.1525/mp.2001.18.4.427

Boltz, M. G. (2004). The cognitive processing of film and musical soundtracks. *Memory & Cognition*, *32*(7), 1194-1205. https://doi.org/10.3758/bf03196892

Bonde, A., & Hansen, A. G. (2013). Audio logo recognition, reduced articulation and coding orientation: Rudiments of quantitative research integrating branding theory, social semiotics and music psychology. *SoundEffects - An Interdisciplinary Journal of Sound and Sound Experience*, *3*(1-2), 112-135. https://doi.org/10.7146/se.v3i1-2.15644

Branthwaite, A., & Ware, R. (1997). *Music in advertising*. ANA - ESOMAR. https://ana.esomar.org/documents/music-in-advertising

Bronner, K., & Hirt, R. (2009). *Audio branding: Brands, sound and communication*. Nomos.

Chang, W. L., & Chang, Y. T. (2013). Exploring the path from sound to brand on customer intention. *Information (Japan)*, *16*(10), 7493-7505.

Colavita, F. B. (1974). Human sensory dominance. *Perception and Psychophysics*, *16*(2), 409-412. https://doi.org/10.3758/bf03203962

Deaville, J., Tan, S., & Rodman, R. (2021). *The Oxford handbook of music and advertising*. Oxford University Press.

DeMarcio, A. (2006). Quoted in The Neglected Sense. Lecture 2, The BBC Reith Lectures given by Daniel Barenboim 2006, http://www.bbc.co.uk/print/radio4/reith2006/lecture2.shtml?print p7

Dubé, L., Chebat, J., & Morin, S. (1995). The effects of background music on consumers' desire to affiliate in buyer-seller interactions. *Psychology and Marketing*, *12*(4), 305-319. https://doi.org/10.1002/mar.4220120407

Fulberg, P. (2003). Using sonic branding in the retail environment — an easy and effective way to create consumer brand loyalty while enhancing the in-store experience. *Journal of Consumer Behaviour*, *3*(2), 193-198. https://doi.org/10.1002/cb.132

Graakjær, N. J. (2013). Sounding out the logo shot. *SoundEffects - An Interdisciplinary Journal of Sound and Sound Experience*, *3*(1-2), 78-95. https://doi.org/10.7146/se.v3i1-2.15642

Graakjær, N. J., & Bonde, A. (2018). Non-musical sound branding – a conceptualization and research overview. *European Journal of Marketing*, *52*(7/8), 1505-1525. https://doi.org/10.1108/ejm-09-2017-0609

Graakjær, Nicolai & Jantzen, Christian. (2009). Producing corporate sounds. An interview with Karsten Kjems and Søren Holme on sonic branding. *In: Music in Advertising: Commercial Sounds in Media Communication and Other Settings.* Aalborg, Germany: Aalborg University Press, pp. 259–274.

Grewal, D., Herhausen, D., Ludwig, S., & Villarroel Ordenes, F. (2022). The future of digital communication research: Considering dynamics and Multimodality. *Journal of Retailing*, *98*(2), 224-240. https://doi.org/10.1016/j.jretai.2021.01.007

Grewal, R., Gupta, S., & Hamilton, R. (2021). Marketing insights from multimedia data: Text, image, audio, and video. *Journal of Marketing Research*, *58*(6), 1025-1033. https://doi.org/10.1177/00222437211054601

Groves, J. (2007). A short history of sound branding. *Audio-Branding*, 41-53. https://doi.org/10.5771/9783845213927-41

Gustafsson, C. (2015). Sonic branding: A consumer-oriented literature review. *Journal of Brand Management*, *22*(1), 20-37. https://doi.org/10.1057/bm.2015.5

Gustafsson, C. (2019). Sonic branding. *The Oxford Handbook of Sound and Imagination, Volume 1*, 357-375. https://doi.org/10.1093/oxfordhb/9780190460167.013.18

Hagtvedt, H. (2022). A brand (new) experience: Art, aesthetics, and sensory effects. *Journal of the Academy of Marketing Science*, *50*(3), 425-428. https://doi.org/10.1007/s11747-021-00833-8

Heilman, C. M., Bowman, D., & Wright, G. P. (2000). The evolution of brand preferences and choice behaviors of consumers new to a market. *Journal of Marketing Research*, *37*(2), 139-155. https://doi.org/10.1509/jmkr.37.2.139.18728

Henderson, P. W., & Cote, J. A. (1998). Guidelines for selecting or modifying logos. *Journal of Marketing*, *62*(2), 14. https://doi.org/10.2307/1252158

Hultén, B., Broweus, N., & Dijk, M. V. (2008). *Sinnesmarknadsföring [Marketing of the Senses]*. Sweden: Liber.

Jackson, D. (2003). *Sonic Branding*. New York: Palgrave Macmillan. https://doi.org/10.1057/9780230503267

Janiszewski, C., & Meyvis, T. (2001). Effects of brand logo complexity, repetition, and spacing on processing fluency and judgment. *Journal of Consumer Research*, *28*(1), 18-32. https://doi.org/10.1086/321945

Jiang, Y., Gorn, G. J., Galli, M., & Chattopadhyay, A. (2015). Does your company have the right logo? How and why circular- and angular-logo shapes influence brand attribute judgments. *Journal of Consumer Research*, *42*(5), 709-726. https://doi.org/10.1093/jcr/ucv049

Kahneman, D., & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. *Heuristics and Biases*, 49-81. https://doi.org/10.1017/cbo9780511808098.004

Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, *57*(1), 1. https://doi.org/10.2307/1252054

Khamis, S., & Keogh, B. (2021). Sonic branding and the aesthetic infrastructure of everyday consumption. *Popular Music*, *40*(2), 281-296. https://doi.org/10.1017/s0261143021000118

Kilian, K. (2009). From brand identity to audio branding. *Audio Branding*, 36-51. https://doi.org/10.5771/9783845216935-36

Kim, Sai-hyun Genie. (2020). Dissecting The Sonic Identity Of Brands: Timbre Of Sonic Logo And Brand Perception. *Wharton Research Scholars*, 208. https://repository.upenn.edu/wharton_research_scholars/208

Knapp, D. (2019). Listen Up! The Rise of Digital Audio Advertising. *IAB Europe*. Retrieved from https://iabeurope.eu/wp-content/uploads/2019/09/IAB-Europe_Economic-Trends-Forum_02_AUDIO_FINAL_PUBLIC.pdf

Kotler, P. (1974). Atmospherics as a Marketing Tool. Journal of Retailing. 49(4).

Krishna, A. (2013). *Customer sense: How the 5 senses influence buying behavior*. Springer.

Krishnan, V., Kellaris, J. J., & Aurand, T. W. (2012). Sonic logos: Can sound influence willingness to pay? *Journal of Product & Brand Management*, *21*(4), 275-284. https://doi.org/10.1108/10610421211246685

Lantos, G. P., & Craton, L. G. (2012). A model of consumer response to advertising music. *Journal of Consumer Marketing*, *29*(1), 22-42. https://doi.org/10.1108/07363761211193028

Lavine, H., Thomsen, C. J., Zanna, M. P., & Borgida, E. (1998). On the primacy of affect in the determination of attitudes and behavior: The moderating role of affective-cognitive ambivalence. *Journal of Experimental Social Psychology*, *34*(4), 398-421. https://doi.org/10.1006/jesp.1998.1357

Lee, A. Y., & Labroo, A. A. (2004). The effect of conceptual and perceptual fluency on brand evaluation. *Journal of Marketing Research*, *41*(2), 151-165. https://doi.org/10.1509/jmkr.41.2.151.28665

Lindstrom, M. (2005). *Brand sense: Build Powerful Brands through Touch, Taste, Smell, Sight, and Sound*. Free Press.

Lusensky, J. (2010). *Sounds Like Branding*. Sweden: Heartbeats International.

Mas, L. (2019). Sonic logos: An experimental design on sound features and brand personality. *Anuario electrónico de estudios en Comunicación Social "Disertaciones"*, *12*(2), 125-141. https://doi.org/10.12804/revistas.urosario.edu.co/disertaciones/a.6373

Mas, L., Bolls, P., Rodero, E., Barreda-Ángeles, M., & Churchill, A. (2020). The impact of the sonic logo's acoustic features on orienting responses, emotions and brand

personality transmission. *Journal of Product & Brand Management*, *30*(5), 740-753. https://doi.org/10.1108/jpbm-05-2019-2370

McCusker, G. (1997). The audio logo: a case study of radio Scotland's on-air identity. *Journal of Communication Management*, *1*(4), 362-373. https://doi.org/10.1108/eb023439

Melzner, J., & Raghubir, P. (2023). The sound of music: The effect of Timbral sound quality in audio logos on brand personality perception. *Journal of Marketing Research*, 002224372211351. https://doi.org/10.1177/00222437221135188

Minsky, L., & Fahey, C. (2014, February 7). *What Does Your Brand Sound Like?* Harvard Business Review. https://hbr.org/2014/02/what-does-your-brand-sound-like

Moosmayer, D. and Melan, M. (2010), "The impact of sound logos on consumer brand evaluation", Enhancing Knowledge Development in Marketing, No. Vol. 28, pp. 1-22.

Morgan, C., Fajardo, T. M., & Townsend, C. (2021). Show it or say it: How brand familiarity influences the effectiveness of image-based versus text-based logos. *Journal of the Academy of Marketing Science*, *49*(3), 566-583. https://doi.org/10.1007/s11747-020-00760-0

North, Adrian. (2004). *Interview with the authors*. Retrieved from: Arning, C. (2006). Sonic Semiotics: The Role of Music in Marketing Communications. *ESOMAR Conference Proceedings*.

Nufer, G., & Moser, H. (2018). The sound of brands. *Reutlingen Working Papers on Marketing & Management*, *2019*(1). https://doi.org/10.15496/publikation-26654

Packard, G., & Berger, J. (2024). The emergence and evolution of consumer language research. *Journal of Consumer Research*, *50*(1), in press. https://doi.org/10.2139/ssrn.4315372

Park, C. W., & Young, S. M. (1986). Consumer Response to Television Commercials: The Impact of Involvement and Background Music on Brand Attitude Formation. *Journal of Marketing Research*, *23*(1), 11–24. https://doi.org/10.2307/3151772

Puligadda, S., & VanBergen, N. (2022). The influence of sound logo instruments on brand personality perceptions: An investigation of brand ruggedness and sophistication. *Journal of Business Research*, *156*(2023), 113531. https://doi.org/10.1016/j.jbusres.2022.113531

Rocklage, M. D., & Fazio, R. H. (2015). The evaluative lexicon: Adjective use as a means of assessing and distinguishing attitude valence, extremity, and emotionality. *Journal of Experimental Social Psychology*, *56*, 214-227. https://doi.org/10.1016/j.jesp.2014.10.005

Rocklage, M. D., & Luttrell, A. (2021). Attitudes based on feelings: Fixed or fleeting? *Psychological Science*, *32*(3), 364-380. https://doi.org/10.1177/0956797620965532

Sadoff, R. H. (2004). Composition by corporate committee: Recipe for cliche. *American Music*, *22*(1), 64. https://doi.org/10.2307/3592967

Scott, S. P., Sheinin, D., & Labrecque, L. I. (2020). The Impact of Sonic Logos on Brand Perceptions: An Abstract. *Marketing Opportunities and Challenges in a Changing Global Marketplace*, 237. https://doi.org/10.1007/978-3-030-39165-2_98

Scott, S. P., Sheinin, D., & Labrecque, L. I. (2022). Small sounds, big impact: sonic logos and their effect on consumer attitudes, emotions, brands and advertising placement. *Journal of Product & Brand Management*, *31*(7), 1091-1103. https://doi.org/10.1108/jpbm-06-2021-3507

Stanovich, K. E., & West, R. F. (2002). Individual differences in reasoning: Implications for the rationality debate? *Heuristics and Biases*, 421-440. https://doi.org/10.1017/cbo9780511808098.026

Tan, S., Cohen, A. J., Lipscomb, S. D., & Kendall, R. A. (2013). *The psychology of music in multimedia*. Oxford University Press.

Tavassoli, N. (1998). Language in multimedia: Interaction of spoken and written information. *Journal of Consumer Research*, *25*(1), 26-37. https://doi.org/10.1086/209524

Tom, G. (1990). Marketing with music. *Journal of Consumer Marketing*, *7*(2), 49-53. https://doi.org/10.1108/eum0000000002576

Treasure, J. (2007). *Sound business*. London: Management Books 2000.

Vidal, M. (2018). Branding Sonoro Sonokey. El método de impulso emocional y mnemotécnico para las marcas. Barcelona: Editorial UOC.

Vorster, I. A. (2015). *The influence of sonic logos in television advertisements: a neuromarketing perspective* (PhD Thesis, Faculty of Business Management, Stellenbosch University). Retrieved from https://core.ac.uk/download/pdf/37440002.pdf

Vroomen, J., & Gelder, B. D. (2000). Sound enhances visual perception: Cross-modal effects of auditory organization on vision. *Journal of Experimental Psychology: Human Perception and Performance*, *26*(5), 1583-1590. https://doi.org/10.1037/0096-1523.26.5.1583

Wazir, M.I. and Wazir, O. (2015), "Effects of sonic logo on brand recognition of the advertised brand", City University Research Journal, Vol. 5 No. 2, pp. 327-337.

Westermann, C. F. (2008). Sound branding and corporate voice: Strategic brand management using sound. In *Usability of Speech Dialog Systems* (pp. 147-155). Springer Berlin Heidelberg.

Zander, M. F. (2006). Musical influences in advertising: How music modifies first impressions of product endorsers and brands. *Psychology of Music*, *34*(4), 465-480. https://doi.org/10.1177/0305735606067158

Zotova, E., & Pakhalov, A. (2020). The Role of Sound in Brand Perception: a Mixed-Methodology Approach. *Proceedings of the European Marketing Academy*, 11th, (84815).

Appendix

SPSS Outputs

1. Sample characteristics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	339	0	1	,39	,488
Age	339	16	74	33,83	14,961
Valid N (listwise)	339				

2. Variables statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
@1_Familiarity	339	1	10	2,48	2,271
@1_Perception	339	1,0	5,0	2,934	,6838
@2_Familiarity	339	1	10	3,27	2,674
@2_Perception	339	1,0	5,0	2,932	,6940
@3_Familiarity	339	1	10	7,00	2,902
@3_Perception	339	1,0	5,0	3,301	,6876
@4_Familiarity	339	1	10	7,90	2,785
@4_Perception	339	1,0	5,0	3,730	,7536
@5_Familiarity	339	1	10	9,19	1,904
@5_Perception	339	1,0	5,0	3,799	,7370
Valid N (listwise)	339				

3. Condition Frequencies

Condition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	129	38,1	38,1	38,1
	1	106	31,3	31,3	69,3
	2	104	30,7	30,7	100,0
	Total	339	100,0	100,0	

4. ANOVA: Logo Condition on Brand Perception

Descriptives

						90% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
@1_Perception	0	129	2,916	,6140	,0541	2,827	3,006	1,0	4,1
	1	106	2,976	,7070	,0687	2,862	3,090	1,0	4,4
	2	104	2,912	,7439	,0729	2,791	3,034	1,0	5,0
	Total	339	2,934	,6838	,0371	2,873	2,995	1,0	5,0
@2_Perception	0	129	2,994	,6212	,0547	2,903	3,084	1,0	4,7
	1	106	2,859	,7064	,0686	2,746	2,973	1,0	5,0
	2	104	2,929	,7631	,0748	2,805	3,053	1,0	5,0
	Total	339	2,932	,6940	,0377	2,870	2,994	1,0	5,0
@3_Perception	0	129	3,343	,6651	,0586	3,246	3,440	1,2	5,0
	1	106	3,177	,7001	,0680	3,065	3,290	1,0	5,0
	2	104	3,374	,6920	,0679	3,261	3,487	1,5	5,0
	Total	339	3,301	,6876	,0373	3,239	3,362	1,0	5,0
@4_Perception	0	129	3,940	,6379	,0562	3,846	4,033	1,7	5,0
	1	106	3,364	,8105	,0787	3,234	3,495	1,0	5,0
	2	104	3,843	,6946	,0681	3,730	3,956	1,7	5,0
	Total	339	3,730	,7536	,0409	3,663	3,798	1,0	5,0
@5_Perception	0	129	3,712	,7350	,0647	3,604	3,819	1,0	5,0
	1	106	3,867	,7580	,0736	3,745	3,989	2,1	5,0
	2	104	3,838	,7138	,0700	3,722	3,955	1,0	5,0
	Total	339	3,799	,7370	,0400	3,733	3,865	1,0	5,0

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
@1_Perception	Between Groups	,279	2	,140	,297	,743
	Within Groups	157,741	336	,469		
	Total	158,020	338			
@2_Perception	Between Groups	1,052	2	,526	1,092	,337
	Within Groups	161,764	336	,481		
	Total	162,816	338			
@3_Perception	Between Groups	2,407	2	1,204	2,569	,078
	Within Groups	157,402	336	,468		
	Total	159,810	338			
@4_Perception	Between Groups	21,186	2	10,593	20,842	<,001
	Within Groups	170,767	336	,508		
	Total	191,953	338			
@5_Perception	Between Groups	1,637	2	,818	1,511	,222
	Within Groups	181,973	336	,542		
	Total	183,610	338			

Multiple Comparisons

Bonferroni

Dependent Variable	(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.	90% Confidence Interval	
						Lower Bound	Upper Bound
@1_Perception	0	1	-,0601	,0898	1,000	-,252	,132
		2	,0038	,0903	1,000	-,189	,197
	1	0	,0601	,0898	1,000	-,132	,252
		2	,0639	,0946	1,000	-,138	,266
	2	0	-,0038	,0903	1,000	-,197	,189
		1	-,0639	,0946	1,000	-,266	,138
@2_Perception	0	1	,1344	,0910	,422	-,060	,329
		2	,0650	,0914	1,000	-,130	,260
	1	0	-,1344	,0910	,422	-,329	,060
		2	-,0694	,0958	1,000	-,274	,135
	2	0	-,0650	,0914	1,000	-,260	,130
		1	,0694	,0958	1,000	-,135	,274
@3_Perception	0	1	,1661	,0897	,195	-,026	,358
		2	-,0306	,0902	1,000	-,223	,162
	1	0	-,1661	,0897	,195	-,358	,026
		2	-,1967	,0945	,114	-,399	,005
	2	0	,0306	,0902	1,000	-,162	,223
		1	,1967	,0945	,114	-,005	,399
@4_Perception	0	1	,5754*	,0935	<,001	,376	,775
		2	,0963	,0940	,919	-,104	,297
	1	0	-,5754*	,0935	<,001	-,775	-,376
		2	-,4791*	,0984	<,001	-,689	-,269
	2	0	-,0963	,0940	,919	-,297	,104
		1	,4791*	,0984	<,001	,269	,689
@5_Perception	0	1	-,1554	,0965	,325	-,362	,051
		2	-,1268	,0970	,576	-,334	,080
	1	0	,1554	,0965	,325	-,051	,362
		2	,0285	,1016	1,000	-,189	,246
	2	0	,1268	,0970	,576	-,080	,334
		1	-,0285	,1016	1,000	-,246	,189

*. The mean difference is significant at the 0.1 level.

5. ANOVA: Logo Condition on Brand Familiarity

Descriptives

		N	Mean	Std. Deviation	Std. Error	90% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
@1_Familiarity	0	129	,17	,470	,041	,10	,24	0	2
	1	106	,33	,700	,068	,22	,44	0	2
	2	104	,31	,684	,067	,20	,42	0	2
	Total	339	,26	,619	,034	,21	,32	0	2
@2_Familiarity	0	129	,56	,799	,070	,44	,67	0	2
	1	106	,32	,670	,065	,21	,43	0	2
	2	104	,43	,747	,073	,31	,55	0	2
	Total	339	,45	,749	,041	,38	,51	0	2
@3_Familiarity	0	129	1,75	,573	,050	1,67	1,84	0	2
	1	106	,88	,881	,086	,74	1,02	0	2
	2	104	1,58	,706	,069	1,46	1,69	0	2
	Total	339	1,42	,812	,044	1,35	1,50	0	2
@4_Familiarity	0	129	1,90	,350	,031	1,85	1,95	0	2
	1	106	1,25	,903	,088	1,10	1,39	0	2
	2	104	1,77	,595	,058	1,67	1,87	0	2
	Total	339	1,65	,698	,038	1,59	1,72	0	2
@5_Familiarity	0	129	1,90	,372	,033	1,84	1,95	0	2
	1	106	1,75	,630	,061	1,65	1,86	0	2
	2	104	1,94	,306	,030	1,89	1,99	0	2
	Total	339	1,87	,458	,025	1,83	1,91	0	2

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
@1_Familiarity	Between Groups	1,789	2	,894	2,351	,097
	Within Groups	127,845	336	,380		
	Total	129,634	338			
@2_Familiarity	Between Groups	3,303	2	1,652	2,977	,052
	Within Groups	186,437	336	,555		
	Total	189,740	338			
@3_Familiarity	Between Groups	47,980	2	23,990	46,099	<,001
	Within Groups	174,852	336	,520		
	Total	222,832	338			
@4_Familiarity	Between Groups	26,845	2	13,423	32,735	<,001
	Within Groups	137,774	336	,410		
	Total	164,619	338			
@5_Familiarity	Between Groups	2,060	2	1,030	5,018	,007
	Within Groups	68,966	336	,205		
	Total	71,027	338			

6. ANOVA: Brand Familiarity on Brand Perception

6.1. HSBC

Descriptives

@1_Perception

	N	Mean	Std. Deviation	Std. Error	90% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	282	2,845	,6434	,0383	2,782	2,909	1,0	4,4
1	25	3,252	,7171	,1434	3,007	3,497	1,0	4,0
2	32	3,466	,7083	,1252	3,253	3,678	2,2	5,0
Total	339	2,934	,6838	,0371	2,873	2,995	1,0	5,0

ANOVA

@1_Perception

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13,786	2	6,893	16,058	<,001
Within Groups	144,234	336	,429		
Total	158,020	338			

Multiple Comparisons

Dependent Variable: @1_Perception

Bonferroni

(I) @1_Familiarity	(J) @1_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval	
					Lower Bound	Upper Bound
0	1	-,4066*	,1367	,009	-,699	-,114
	2	-,6202*	,1222	<,001	-,881	-,359
1	0	,4066*	,1367	,009	,114	,699
	2	-,2136	,1749	,668	-,587	,160
2	0	,6202*	,1222	<,001	,359	,881
	1	,2136	,1749	,668	-,160	,587

*. The mean difference is significant at the 0.1 level.

6.2. T-Mobile

Descriptives

@2_Perception

	N	Mean	Std. Deviation	Std. Error	90% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	241	2,827	,6405	,0413	2,758	2,895	1,0	4,2
1	45	3,049	,7086	,1056	2,871	3,226	1,4	5,0
2	53	3,311	,7762	,1066	3,133	3,490	1,5	5,0
Total	339	2,932	,6940	,0377	2,870	2,994	1,0	5,0

ANOVA

@2_Perception

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10,920	2	5,460	12,078	<,001
Within Groups	151,896	336	,452		
Total	162,816	338			

Multiple Comparisons

Dependent Variable: @2_Perception

Bonferroni

(I) @2_Familiarity	(J) @2_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval	
					Lower Bound	Upper Bound
0	1	-,2223	,1092	,128	-,456	,011
	2	-,4848*	,1020	<,001	-,703	-,267
1	0	,2223	,1092	,128	-,011	,456
	2	-,2624	,1363	,165	-,554	,029
2	0	,4848*	,1020	<,001	,267	,703
	1	,2624	,1363	,165	-,029	,554

*. The mean difference is significant at the 0.1 level.

6.3. LG

Descriptives

@3_Perception

	N	Mean	Std. Deviation	Std. Error	90% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	70	2,989	,5529	,0661	2,878	3,099	1,0	4,3
1	55	3,200	,7525	,1015	3,030	3,370	1,0	5,0
2	214	3,429	,6757	,0462	3,353	3,505	1,2	5,0
Total	339	3,301	,6876	,0373	3,239	3,362	1,0	5,0

ANOVA

@3_Perception

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10,899	2	5,449	12,296	<,001
Within Groups	148,911	336	,443		
Total	159,810	338			

Multiple Comparisons

Dependent Variable: @3_Perception

Bonferroni

(I) @3_Familiarity	(J) @3_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval	
					Lower Bound	Upper Bound
0	1	-,2114	,1200	,237	-,468	,045
	2	-,4404*	,0917	<,001	-,636	-,245
1	0	,2114	,1200	,237	-,045	,468
	2	-,2290*	,1006	,071	-,444	-,014
2	0	,4404*	,0917	<,001	,245	,636
	1	,2290*	,1006	,071	,014	,444

*. The mean difference is significant at the 0.1 level.

6.4. Audi

Descriptives

@4_Perception

	N	Mean	Std. Deviation	Std. Error	90% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	44	2,936	,7166	,1080	2,755	3,118	1,0	4,3
1	29	3,066	,7988	,1483	2,813	3,318	1,0	4,5
2	266	3,934	,6156	,0377	3,872	3,996	2,4	5,0
Total	339	3,730	,7536	,0409	3,663	3,798	1,0	5,0

ANOVA

@4_Perception

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	51,570	2	25,785	61,716	<,001
Within Groups	140,383	336	,418		
Total	191,953	338			

Multiple Comparisons

Dependent Variable: @4_Perception

Bonferroni

(I) @4_Familiarity	(J) @4_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval	
					Lower Bound	Upper Bound
0	1	-,1292	,1546	1,000	-,460	,201
	2	-,9975*	,1052	<,001	-1,222	-,773
1	0	,1292	,1546	1,000	-,201	,460
	2	-,8683*	,1264	<,001	-1,138	-,598
2	0	,9975*	,1052	<,001	,773	1,222
	1	,8683*	,1264	<,001	,598	1,138

*. The mean difference is significant at the 0.1 level.

6.5. Netflix

Descriptives

@5_Perception

	N	Mean	Std. Deviation	Std. Error	90% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0	16	2,994	,6351	,1588	2,715	3,272	1,0	3,8
1	13	3,154	,5967	,1655	2,859	3,449	2,0	4,2
2	310	3,868	,7106	,0404	3,801	3,934	1,0	5,0
Total	339	3,799	,7370	,0400	3,733	3,865	1,0	5,0

ANOVA

@5_Perception

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17,251	2	8,625	17,421	<,001
Within Groups	166,359	336	,495		
Total	183,610	338			

Multiple Comparisons

Dependent Variable: @5_Perception

Bonferroni

(I) @5_Familiarity	(J) @5_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval	
					Lower Bound	Upper Bound
0	1	-,1601	,2627	1,000	-,722	,401
	2	-,8740*	,1804	<,001	-1,259	-,489
1	0	,1601	,2627	1,000	-,401	,722
	2	-,7139*	,1992	,001	-1,140	-,288
2	0	,8740*	,1804	<,001	,489	1,259
	1	,7139*	,1992	,001	,288	1,140

*. The mean difference is significant at the 0.1 level.

7. Univariate Analysis of Variance

7.1. HSBC

Descriptive Statistics

Dependent Variable: @1_Perception

@1_Familiarity	Condition	Mean	Std. Deviation	N
0	0	2,915	,5851	112
	1	2,820	,6553	85
	2	2,779	,7010	85
	Total	2,845	,6434	282
1	0	3,017	,9154	12
	1	3,614	,2795	7
	2	3,300	,4604	6
	Total	3,252	,7171	25
2	0	2,700	,4123	5
	1	3,607	,6474	14
	2	3,608	,7041	13
	Total	3,466	,7083	32
Total	0	2,916	,6140	129
	1	2,976	,7070	106
	2	2,913	,7439	104
	Total	2,934	,6838	339

Tests of Between-Subjects Effects

Dependent Variable: @1_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	13,969[a]	4	3,492	8,097	<,001	,088
Intercept	1221,402	1	1221,402	2831,973	<,001	,895
Condition	,183	2	,091	,212	,809	,001
@1_Familiarity	13,690	2	6,845	15,871	<,001	,087
Error	144,051	334	,431			
Total	3076,100	339				
Corrected Total	158,020	338				

a. R Squared = ,088 (Adjusted R Squared = ,077)

1. Condition

Estimates

Dependent Variable: @1_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,197	,077	3,070	3,324
1	3,210	,079	3,080	3,340
2	3,154	,080	3,022	3,286

Pairwise Comparisons

Dependent Variable: @1_Perception

(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.[a]	90% Confidence Interval for Difference[a] Lower Bound	90% Confidence Interval for Difference[a] Upper Bound
0	1	-,013	,087	1,000	-,199	,173
	2	,043	,087	1,000	-,143	,230
1	0	,013	,087	1,000	-,173	,199
	2	,056	,091	1,000	-,138	,250
2	0	-,043	,087	1,000	-,230	,143
	1	-,056	,091	1,000	-,250	,138

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @1_Perception

Bonferroni

(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	1	-,060	,0861	1,000	-,244	,124
	2	,004	,0865	1,000	-,181	,189
1	0	,060	,0861	1,000	-,124	,244
	2	,064	,0906	1,000	-,130	,258
2	0	-,004	,0865	1,000	-,189	,181
	1	-,064	,0906	1,000	-,258	,130

Based on observed means.
The error term is Mean Square(Error) = ,431.

2. @1_Familiarity

Estimates

Dependent Variable: @1_Perception

@1_Familiarity	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	2,844	,039	2,779	2,909
1	3,249	,132	3,031	3,466
2	3,467	,117	3,275	3,660

Pairwise Comparisons

Dependent Variable: @1_Perception

(I) @1_Familiarity	(J) @1_Familiarity	Mean Difference (I-J)	Std. Error	Sig.[b]	90% Confidence Interval for Difference[b] Lower Bound	90% Confidence Interval for Difference[b] Upper Bound
0	1	-,404*	,137	,010	-,697	-,111
	2	-,623*	,124	<,001	-,888	-,358
1	0	,404*	,137	,010	,111	,697
	2	-,219	,177	,652	-,597	,159
2	0	,623*	,124	<,001	,358	,888
	1	,219	,177	,652	-,159	,597

Based on estimated marginal means

*. The mean difference is significant at the ,1 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @1_Perception

Bonferroni

(I) @1_Familiarity	(J) @1_Familiarity	Mean Difference (I-J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	1	-,407*	,1370	,010	-,699	-,114
	2	-,620*	,1225	<,001	-,882	-,358
1	0	,407*	,1370	,010	,114	,699
	2	-,214	,1753	,672	-,588	,161
2	0	,620*	,1225	<,001	,358	,882
	1	,214	,1753	,672	-,161	,588

Based on observed means.
The error term is Mean Square(Error) = ,431.

*. The mean difference is significant at the ,1 level.

7.2. T-Mobile

Descriptive Statistics

Dependent Variable: @2_Perception

@2_Familiarity	Condition	Mean	Std. Deviation	N
0	0	2,885	,5746	82
	1	2,807	,6205	84
	2	2,784	,7289	75
	Total	2,827	,6405	241
1	0	3,036	,6238	22
	1	2,790	,8913	10
	2	3,269	,6750	13
	Total	3,049	,7086	45
2	0	3,312	,6754	25
	1	3,283	,9935	12
	2	3,331	,7964	16
	Total	3,311	,7762	53
Total	0	2,994	,6212	129
	1	2,859	,7064	106
	2	2,929	,7631	104
	Total	2,932	,6940	339

Tests of Between-Subjects Effects

Dependent Variable: @2_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11,285[a]	4	2,821	6,219	<,001	,069
Intercept	1809,300	1	1809,300	3988,005	<,001	,923
Condition	,365	2	,182	,402	,669	,002
@2_Familiarity	10,233	2	5,117	11,278	<,001	,063
Error	151,531	334	,454			
Total	3076,790	339				
Corrected Total	162,816	338				

a. R Squared = ,069 (Adjusted R Squared = ,058)

1. Condition

Estimates

Dependent Variable: @2_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,094	,064	2,988	3,201
1	3,014	,075	2,890	3,139
2	3,058	,073	2,937	3,179

Pairwise Comparisons

Dependent Variable: @2_Perception

(I) Condition	(J) Condition	Mean Difference (I–J)	Std. Error	Sig.[a]	90% Confidence Interval for Difference[a] Lower Bound	Upper Bound
0	1	,080	,089	1,000	-,111	,271
	2	,036	,089	1,000	-,154	,227
1	0	-,080	,089	1,000	-,271	,111
	2	-,044	,093	1,000	-,243	,155
2	0	-,036	,089	1,000	-,227	,154
	1	,044	,093	1,000	-,155	,243

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @2_Perception

Bonferroni

(I) Condition	(J) Condition	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	Upper Bound
0	1	,134	,0883	,387	-,054	,323
	2	,065	,0888	1,000	-,125	,255
1	0	-,134	,0883	,387	-,323	,054
	2	-,069	,0930	1,000	-,268	,129
2	0	-,065	,0888	1,000	-,255	,125
	1	,069	,0930	1,000	-,129	,268

Based on observed means.
The error term is Mean Square(Error) = ,454.

2. @2_Familiarity

Estimates

Dependent Variable: @2_Perception

@2_Familiarity	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	2,827	,043	2,755	2,899
1	3,038	,101	2,872	3,205
2	3,302	,093	3,148	3,455

Pairwise Comparisons

Dependent Variable: @2_Perception

(I) @2_Familiarity	(J) @2_Familiarity	Mean Difference (I–J)	Std. Error	Sig.[b]	90% Confidence Interval for Difference[b] Lower Bound	Upper Bound
0	1	-,211	,110	,167	-,447	,024
	2	-,475*	,103	<,001	-,694	-,255
1	0	,211	,110	,167	-,024	,447
	2	-,263	,137	,164	-,555	,029
2	0	,475*	,103	<,001	,255	,694
	1	,263	,137	,164	-,029	,555

Based on estimated marginal means

*. The mean difference is significant at the ,1 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @2_Perception

Bonferroni

(I) @2_Familiarity	(J) @2_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	Upper Bound
0	1	-,222	,1094	,129	-,456	,011
	2	-,485*	,1022	<,001	-,703	-,266
1	0	,222	,1094	,129	-,011	,456
	2	-,262	,1365	,166	-,554	,029
2	0	,485*	,1022	<,001	,266	,703
	1	,262	,1365	,166	-,029	,554

Based on observed means.
The error term is Mean Square(Error) = ,454.

*. The mean difference is significant at the ,1 level.

7.3. LG

Descriptive Statistics

Dependent Variable: @3_Perception

@3_Familiarity	Condition	Mean	Std. Deviation	N
0	0	3,333	,4272	9
	1	2,929	,5422	48
	2	2,969	,6170	13
	Total	2,989	,5529	70
1	0	3,100	,6013	14
	1	3,248	,8913	23
	2	3,217	,6947	18
	Total	3,200	,7525	55
2	0	3,376	,6867	106
	1	3,471	,6433	35
	2	3,485	,6778	73
	Total	3,429	,6757	214
Total	0	3,343	,6651	129
	1	3,177	,7001	106
	2	3,374	,6920	104
	Total	3,301	,6876	339

Tests of Between-Subjects Effects

Dependent Variable: @3_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11,182[a]	4	2,795	6,282	<,001	,070
Intercept	2410,983	1	2410,983	5418,010	<,001	,942
Condition	,283	2	,142	,318	,728	,002
@3_Familiarity	8,774	2	4,387	9,859	<,001	,056
Error	148,628	334	,445			
Total	3853,500	339				
Corrected Total	159,810	338				

a. R Squared = ,070 (Adjusted R Squared = ,059)

1. Condition

Estimates

Dependent Variable: @3_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,173	,071	3,055	3,291
1	3,203	,066	3,094	3,313
2	3,244	,072	3,124	3,363

Pairwise Comparisons

Dependent Variable: @3_Perception

(I) Condition	(J) Condition	Mean Difference (I–J)	Std. Error	Sig.[a]	90% Confidence Interval for Difference[a] Lower Bound	Upper Bound
0	1	-,030	,098	1,000	-,239	,179
	2	-,070	,088	1,000	-,259	,119
1	0	,030	,098	1,000	-,179	,239
	2	-,040	,099	1,000	-,251	,170
2	0	,070	,088	1,000	-,119	,259
	1	,040	,099	1,000	-,170	,251

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

2. @3_Familiarity

Estimates

Dependent Variable: @3_Perception

@3_Familiarity	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	2,988	,086	2,847	3,130
1	3,198	,090	3,049	3,347
2	3,434	,048	3,354	3,513

Pairwise Comparisons

Dependent Variable: @3_Perception

(I) @3_Familiarity	(J) @3_Familiarity	Mean Difference (I–J)	Std. Error	Sig.[b]	90% Confidence Interval for Difference[b] Lower Bound	Upper Bound
0	1	-,209	,122	,264	-,471	,052
	2	-,445*	,103	<,001	-,665	-,225
1	0	,209	,122	,264	-,052	,471
	2	-,236*	,104	,071	-,457	-,014
2	0	,445*	,103	<,001	,225	,665
	1	,236*	,104	,071	,014	,457

Based on estimated marginal means

*. The mean difference is significant at the ,1 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @3_Perception

Bonferroni

(I) Condition	(J) Condition	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	1	,166	,0875	,175	–,021	,353
	2	–,031	,0879	1,000	–,218	,157
1	0	–,166	,0875	,175	–,353	,021
	2	–,197	,0921	,100	–,393	,000
2	0	,031	,0879	1,000	–,157	,218
	1	,197	,0921	,100	,000	,393

Based on observed means.
The error term is Mean Square(Error) = ,445.

Multiple Comparisons

Dependent Variable: @3_Perception

Bonferroni

(I) @3_Familiarity	(J) @3_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	1	–,211	,1202	,238	–,468	,045
	2	–,440*	,0919	<,001	–,637	–,244
1	0	,211	,1202	,238	–,045	,468
	2	–,229*	,1008	,071	–,444	–,013
2	0	,440*	,0919	<,001	,244	,637
	1	,229*	,1008	,071	,013	,444

Based on observed means.
The error term is Mean Square(Error) = ,445.
*. The mean difference is significant at the ,1 level.

7.4. Audi

Descriptive Statistics

Dependent Variable: @4_Perception

@4_Familiarity	Condition	Mean	Std. Deviation	N
0	0	2,800	,8485	2
	1	2,942	,7492	33
	2	2,944	,6483	9
	Total	2,936	,7166	44
1	0	3,222	,7463	9
	1	2,943	,9280	14
	2	3,117	,5947	6
	Total	3,066	,7988	29
2	0	4,014	,5776	118
	1	3,700	,6542	59
	2	3,983	,6066	89
	Total	3,934	,6156	266
Total	0	3,940	,6379	129
	1	3,364	,8105	106
	2	3,843	,6946	104
	Total	3,730	,7536	339

Tests of Between-Subjects Effects

Dependent Variable: @4_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	55,504[a]	4	13,876	33,966	<,001	,289
Intercept	1568,595	1	1568,595	3839,607	<,001	,920
Condition	3,934	2	1,967	4,815	,009	,028
@4_Familiarity	34,318	2	17,159	42,002	<,001	,201
Error	136,449	334	,409			
Total	4908,650	339				
Corrected Total	191,953	338				

a. R Squared = ,289 (Adjusted R Squared = ,281)

1. Condition

Estimates

Dependent Variable: @4_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,454	,077	3,327	3,582
1	3,184	,067	3,072	3,295
2	3,410	,079	3,279	3,540

Pairwise Comparisons

Dependent Variable: @4_Perception

(I) Condition	(J) Condition	Mean Difference (I–J)	Std. Error	Sig.[b]	90% Confidence Interval for Difference[b] Lower Bound	90% Confidence Interval for Difference[b] Upper Bound
0	1	,271*	,091	,009	,076	,465
	2	,045	,085	1,000	–,136	,226
1	0	–,271*	,091	,009	–,465	–,076
	2	–,226*	,093	,046	–,424	–,028
2	0	–,045	,085	1,000	–,226	,136
	1	,226*	,093	,046	,028	,424

Based on estimated marginal means
*. The mean difference is significant at the ,1 level.
b. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @4_Perception

Bonferroni

(I) Condition	(J) Condition	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	1	,575*	,0838	<,001	,396	,754
	2	,096	,0842	,762	–,084	,276
1	0	–,575*	,0838	<,001	–,754	–,396
	2	–,479*	,0882	<,001	–,668	–,291
2	0	–,096	,0842	,762	–,276	,084
	1	,479*	,0882	<,001	,291	,668

Based on observed means.
The error term is Mean Square(Error) = ,409.
*. The mean difference is significant at the ,1 level.

2. @4_Familiarity

Estimates

Dependent Variable: @4_Perception

@4_Familiarity	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,043	,102	2,875	3,212
1	3,100	,119	2,903	3,297
2	3,904	,040	3,837	3,970

Pairwise Comparisons

Dependent Variable: @4_Perception

(I) @4_Familiarity	(J) @4_Familiarity	Mean Difference (I–J)	Std. Error	Sig.[b]	90% Confidence Interval for Difference[b] Lower Bound	90% Confidence Interval for Difference[b] Upper Bound
0	1	–,057	,155	1,000	–,388	,274
	2	–,860*	,113	<,001	–1,102	–,619
1	0	,057	,155	1,000	–,274	,388
	2	–,803*	,127	<,001	–1,074	–,532
2	0	,860*	,113	<,001	,619	1,102
	1	,803*	,127	<,001	,532	1,074

Based on estimated marginal means
*. The mean difference is significant at the ,1 level.
b. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @4_Perception

Bonferroni

(I) @4_Familiarity	(J) @4_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	1	–,129	,1529	1,000	–,456	,198
	2	–,997*	,1040	<,001	–1,220	–,775
1	0	,129	,1529	1,000	–,198	,456
	2	–,868*	,1250	<,001	–1,135	–,601
2	0	,997*	,1040	<,001	,775	1,220
	1	,868*	,1250	<,001	,601	1,135

Based on observed means.
The error term is Mean Square(Error) = ,409.
*. The mean difference is significant at the ,1 level.

7.5. Netflix

Descriptive Statistics

Dependent Variable: @5_Perception

@5_Familiarity	Condition	Mean	Std. Deviation	N
0	0	3,067	,1155	3
	1	3,118	,4119	11
	2	2,200	1,6971	2
	Total	2,994	,6351	16
1	0	3,029	,7296	7
	1	3,425	,1258	4
	2	3,050	,7778	2
	Total	3,154	,5967	13
2	0	3,768	,7192	119
	1	3,977	,7494	91
	2	3,887	,6525	100
	Total	3,868	,7106	310
Total	0	3,712	,7350	129
	1	3,867	,7580	106
	2	3,838	,7138	104
	Total	3,799	,7370	339

Tests of Between-Subjects Effects

Dependent Variable: @5_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	19,983[a]	4	4,996	10,198	<,001	,109
Intercept	687,937	1	687,937	1404,242	<,001	,808
Condition	2,733	2	1,366	2,789	,063	,016
@5_Familiarity	18,347	2	9,173	18,725	<,001	,101
Error	163,626	334	,490			
Total	5076,490	339				
Corrected Total	183,610	338				

a. R Squared = ,109 (Adjusted R Squared = ,098)

1. Condition

Estimates

Dependent Variable: @5_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,224	,102	3,057	3,392
1	3,444	,100	3,279	3,609
2	3,323	,111	3,141	3,505

Pairwise Comparisons

Dependent Variable: @5_Perception

(I) Condition	(J) Condition	Mean Difference (I–J)	Std. Error	Sig.[b]	90% Confidence Interval for Difference[b] Lower Bound	90% Confidence Interval for Difference[b] Upper Bound
0	1	-,220*	,093	,056	-,418	-,021
	2	-,099	,093	,863	-,296	,099
1	0	,220*	,093	,056	,021	,418
	2	,121	,098	,652	-,088	,330
2	0	,099	,093	,863	-,099	,296
	1	-,121	,098	,652	-,330	,088

Based on estimated marginal means

*. The mean difference is significant at the ,1 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @5_Perception

Bonferroni

(I) Condition	(J) Condition	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	1	-,155	,0918	,274	-,351	,041
	2	-,127	,0922	,510	-,324	,070
1	0	,155	,0918	,274	-,041	,351
	2	,029	,0966	1,000	-,178	,235
2	0	,127	,0922	,510	-,070	,324
	1	-,029	,0966	1,000	-,235	,178

Based on observed means.

The error term is Mean Square(Error) = ,490.

2. @5_Familiarity

Estimates

Dependent Variable: @5_Perception

@5_Familiarity	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	2,937	,178	2,644	3,229
1	3,177	,195	2,856	3,499
2	3,878	,040	3,812	3,943

Pairwise Comparisons

Dependent Variable: @5_Perception

(I) @5_Familiarity	(J) @5_Familiarity	Mean Difference (I–J)	Std. Error	Sig.[b]	90% Confidence Interval for Difference[b] Lower Bound	90% Confidence Interval for Difference[b] Upper Bound
0	1	-,241	,264	1,000	-,804	,323
	2	-,941*	,182	<,001	-1,331	-,551
1	0	,241	,264	1,000	-,323	,804
	2	-,700*	,199	,001	-1,125	-,276
2	0	,941*	,182	<,001	,551	1,331
	1	,700*	,199	,001	,276	1,125

Based on estimated marginal means

*. The mean difference is significant at the ,1 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multiple Comparisons

Dependent Variable: @5_Perception

Bonferroni

(I) @5_Familiarity	(J) @5_Familiarity	Mean Difference (I–J)	Std. Error	Sig.	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	1	-,160	,2613	1,000	-,719	,398
	2	-,874*	,1794	<,001	-1,257	-,491
1	0	,160	,2613	1,000	-,398	,719
	2	-,714*	,1982	,001	-1,137	-,290
2	0	,874*	,1794	<,001	,491	1,257
	1	,714*	,1982	,001	,290	1,137

Based on observed means.

The error term is Mean Square(Error) = ,490.

*. The mean difference is significant at the ,1 level.

8. Interaction Effect

8.1. HSBC

Descriptive Statistics

Dependent Variable: @1_Perception

Condition	Mean	Std. Deviation	N
0	2,916	,6140	129
1	2,976	,7070	106
2	2,913	,7439	104
Total	2,934	,6838	339

Tests of Between-Subjects Effects

Dependent Variable: @1_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	17,464[a]	3	5,821	13,874	<,001	,111
Intercept	2335,023	1	2335,023	5565,264	<,001	,943
Condition * @1_Familiarity	17,464	3	5,821	13,874	<,001	,111
Error	140,556	335	,420			
Total	3076,100	339				
Corrected Total	158,020	338				

a. R Squared = ,111 (Adjusted R Squared = ,103)

Estimated Marginal Means

Condition

Dependent Variable: @1_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	2,857[a]	,043	2,785	2,929
1	2,964[a]	,039	2,899	3,028
2	2,954[a]	,040	2,889	3,020

a. Covariates appearing in the model are evaluated at the following values: @1_Familiarity = ,26.

8.2. T-Mobile

Descriptive Statistics

Dependent Variable: @2_Perception

Condition	Mean	Std. Deviation	N
0	2,994	,6212	129
1	2,859	,7064	106
2	2,929	,7631	104
Total	2,932	,6940	339

Tests of Between-Subjects Effects

Dependent Variable: @2_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11,249[a]	3	3,750	8,288	<,001	,069
Intercept	1997,518	1	1997,518	4415,017	<,001	,929
Condition * @2_Familiarity	11,249	3	3,750	8,288	<,001	,069
Error	151,566	335	,452			
Total	3076,790	339				
Corrected Total	162,816	338				

a. R Squared = ,069 (Adjusted R Squared = ,061)

Estimated Marginal Means

Condition

Dependent Variable: @2_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	2,931[a]	,041	2,863	2,999
1	2,907[a]	,050	2,824	2,990
2	2,952[a]	,046	2,876	3,029

a. Covariates appearing in the model are evaluated at the following values: @2_Familiarity = ,45.

8.3. LG

Descriptive Statistics

Dependent Variable: @3_Perception

Condition	Mean	Std. Deviation	N
0	3,343	,6651	129
1	3,177	,7001	106
2	3,374	,6920	104
Total	3,301	,6876	339

Tests of Between-Subjects Effects

Dependent Variable: @3_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	11,579[a]	3	3,860	8,723	<,001	,072
Intercept	734,136	1	734,136	1659,139	<,001	,832
Condition * @3_Familiarity	11,579	3	3,860	8,723	<,001	,072
Error	148,231	335	,442			
Total	3853,500	339				
Corrected Total	159,810	338				

a. R Squared = ,072 (Adjusted R Squared = ,064)

Estimated Marginal Means

Condition

Dependent Variable: @3_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,259[a]	,049	3,178	3,341
1	3,335[a]	,075	3,210	3,459
2	3,339[a]	,057	3,245	3,432

a. Covariates appearing in the model are evaluated at the following values: @3_Familiarity = 1,42.

8.4. Audi

Descriptive Statistics

Dependent Variable: @4_Perception

Condition	Mean	Std. Deviation	N
0	3,940	,6379	129
1	3,364	,8105	106
2	3,843	,6946	104
Total	3,730	,7536	339

Tests of Between-Subjects Effects

Dependent Variable: @4_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	53,506[a]	3	17,835	43,156	<,001	,279
Intercept	412,975	1	412,975	999,275	<,001	,749
Condition * @4_Familiarity	53,506	3	17,835	43,156	<,001	,279
Error	138,447	335	,413			
Total	4908,650	339				
Corrected Total	191,953	338				

a. R Squared = ,279 (Adjusted R Squared = ,272)

Estimated Marginal Means

Condition

Dependent Variable: @4_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,806[a]	,051	3,722	3,889
1	3,522[a]	,068	3,409	3,635
2	3,779[a]	,058	3,684	3,874

a. Covariates appearing in the model are evaluated at the following values: @4_Familiarity = 1,65.

8.5. Netflix

Descriptive Statistics

Dependent Variable: @5_Perception

Condition	Mean	Std. Deviation	N
0	3,712	,7350	129
1	3,867	,7580	106
2	3,838	,7138	104
Total	3,799	,7370	339

Tests of Between-Subjects Effects

Dependent Variable: @5_Perception

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	18,961[a]	3	6,320	12,859	<,001	,103
Intercept	162,019	1	162,019	329,650	<,001	,496
Condition * @5_Familiarity	18,961	3	6,320	12,859	<,001	,103
Error	164,649	335	,491			
Total	5076,490	339				
Corrected Total	183,610	338				

a. R Squared = ,103 (Adjusted R Squared = ,095)

Estimated Marginal Means

Condition

Dependent Variable: @5_Perception

Condition	Mean	Std. Error	90% Confidence Interval Lower Bound	90% Confidence Interval Upper Bound
0	3,702[a]	,060	3,603	3,802
1	3,905[a]	,069	3,792	4,019
2	3,819[a]	,066	3,710	3,927

a. Covariates appearing in the model are evaluated at the following values: @5_Familiarity = 1,87.

9. Binary Logistic Regression

9.2. HSBC

Block 0: Beginning Block

Classification Table[a,b]

Observed			Predicted @1_Perception 0	Predicted @1_Perception 1	Percentage Correct
Step 0	@1_Perception	0	224	0	100,0
		1	115	0	,0
	Overall Percentage				66,1

a. Constant is included in the model.

b. The cut value is ,500

Block 1: Method = Enter

Classification Table[a]

Observed			Predicted @1_Perception 0	Predicted @1_Perception 1	Percentage Correct
Step 1	@1_Perception	0	205	19	91,5
		1	77	38	33,0
	Overall Percentage				71,7

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Condition	-,063	,149	,177	1	,674	,939
	@1_Familiarity	,320	,056	32,690	1	<,001	1,377
	Constant	-1,439	,225	40,897	1	<,001	,237

a. Variable(s) entered on step 1: Condition, @1_Familiarity.

9.3. T-Mobile

Block 0: Beginning Block

Classification Table[a,b]

Observed			Predicted @2_Perception 0	Predicted @2_Perception 1	Percentage Correct
Step 0	@2_Perception	0	225	0	100,0
		1	114	0	,0
	Overall Percentage				66,4

a. Constant is included in the model.

b. The cut value is ,500

Block 1: Method = Enter

Classification Table[a]

Observed			Predicted @2_Perception 0	Predicted @2_Perception 1	Percentage Correct
Step 1	@2_Perception	0	199	26	88,4
		1	68	46	40,4
	Overall Percentage				72,3

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Condition	,100	,153	,430	1	,512	1,106
	@2_Familiarity	,330	,048	46,455	1	<,001	1,391
	Constant	-1,930	,270	51,263	1	<,001	,145

a. Variable(s) entered on step 1: Condition, @2_Familiarity.

9.4. LG

Block 0: Beginning Block

Classification Table[a,b]

Observed			Predicted @3_Perception 0	Predicted @3_Perception 1	Percentage Correct
Step 0	@3_Perception	0	0	127	,0
		1	0	212	100,0
	Overall Percentage				62,5

a. Constant is included in the model.

b. The cut value is ,500

Block 1: Method = Enter

Classification Table[a]

Observed			Predicted @3_Perception 0	Predicted @3_Perception 1	Percentage Correct
Step 1	@3_Perception	0	49	78	38,6
		1	26	186	87,7
	Overall Percentage				69,3

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Condition	,111	,149	,548	1	,459	1,117
	@3_Familiarity	,258	,043	36,454	1	<,001	1,294
	Constant	-1,347	,356	14,352	1	<,001	,260

a. Variable(s) entered on step 1: Condition, @3_Familiarity.

9.5. Audi

Block 0: Beginning Block

Classification Table[a,b]

Observed			Predicted @4_Perception 0	1	Percentage Correct
Step 0	@4_Perception	0	0	58	,0
		1	0	281	100,0
	Overall Percentage				82,9

a. Constant is included in the model.

b. The cut value is ,500

Block 1: Method = Enter

Classification Table[a]

Observed			Predicted @4_Perception 0	1	Percentage Correct
Step 1	@4_Perception	0	27	31	46,6
		1	14	267	95,0
	Overall Percentage				86,7

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Condition	-,238	,251	,903	1	,342	,788
	@4_Familiarity	,503	,060	70,201	1	<,001	1,653
	Constant	-1,617	,495	10,679	1	,001	,199

a. Variable(s) entered on step 1: Condition, @4_Familiarity.

9.6. Netflix

Block 0: Beginning Block

Classification Table[a,b]

Observed			Predicted @5_Perception 0	1	Percentage Correct
Step 0	@5_Perception	0	0	57	,0
		1	0	282	100,0
	Overall Percentage				83,2

a. Constant is included in the model.

b. The cut value is ,500

Block 1: Method = Enter

Classification Table[a]

Observed			Predicted @5_Perception 0	1	Percentage Correct
Step 1	@5_Perception	0	7	50	12,3
		1	4	278	98,6
	Overall Percentage				84,1

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Condition	-,015	,185	,007	1	,935	,985
	@5_Familiarity	,262	,063	17,512	1	<,001	1,299
	Constant	-,717	,586	1,494	1	,222	,488

a. Variable(s) entered on step 1: Condition, @5_Familiarity.

10. Correlations

10.2. HSBC

Correlations

		Condition	@1_Familiarity	@1_Perception
Condition	Pearson Correlation	1	,073	,000
	Sig. (2-tailed)		,183	,996
	N	339	339	339
@1_Familiarity	Pearson Correlation	,073	1	,325**
	Sig. (2-tailed)	,183		<,001
	N	339	339	339
@1_Perception	Pearson Correlation	,000	,325**	1
	Sig. (2-tailed)	,996	<,001	
	N	339	339	339

**. Correlation is significant at the 0.01 level (2-tailed).

10.3. T-Mobile

Correlations

		Condition	@2_Familiarity	@2_Perception
Condition	Pearson Correlation	1	-,093	-,043
	Sig. (2-tailed)		,088	,432
	N	339	339	339
@2_Familiarity	Pearson Correlation	-,093	1	,280**
	Sig. (2-tailed)	,088		<,001
	N	339	339	339
@2_Perception	Pearson Correlation	-,043	,280**	1
	Sig. (2-tailed)	,432	<,001	
	N	339	339	339

**. Correlation is significant at the 0.01 level (2-tailed).

10.4. LG

Correlations

		Condition	@3_Familiarity	@3_Perception
Condition	Pearson Correlation	1	-,116*	,011
	Sig. (2-tailed)		,033	,839
	N	339	339	339
@3_Familiarity	Pearson Correlation	-,116*	1	,306**
	Sig. (2-tailed)	,033		<,001
	N	339	339	339
@3_Perception	Pearson Correlation	,011	,306**	1
	Sig. (2-tailed)	,839	<,001	
	N	339	339	339

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

10.5. Audi

Correlations

		Condition	@4_Familiarity	@4_Perception
Condition	Pearson Correlation	1	-,105	-,072
	Sig. (2-tailed)		,054	,184
	N	339	339	339
@4_Familiarity	Pearson Correlation	-,105	1	,570**
	Sig. (2-tailed)	,054		<,001
	N	339	339	339
@4_Perception	Pearson Correlation	-,072	,570**	1
	Sig. (2-tailed)	,184	<,001	
	N	339	339	339

**. Correlation is significant at the 0.01 level (2-tailed).

10.6. Netflix

Correlations

		Condition	@5_Familiarity	@5_Perception
Condition	Pearson Correlation	1	,013	,075
	Sig. (2-tailed)		,817	,170
	N	339	339	339
@5_Familiarity	Pearson Correlation	,013	1	,323**
	Sig. (2-tailed)	,817		<,001
	N	339	339	339
@5_Perception	Pearson Correlation	,075	,323**	1
	Sig. (2-tailed)	,170	<,001	
	N	339	339	339

**. Correlation is significant at the 0.01 level (2-tailed).

Summary

Sound branding is an emerging and multidisciplinary discipline that combines psychology and neuroscience to leverage the impact of sounds on people's emotions and memory. It is a crucial aspect of corporate identity (Jackson, 2003), aiming to harness the power of sound in establishing strong connections and associations between brands and customers (Barrio Fraile et al., 2021). In today's fast-paced world, the significance of multimodality in creating a memorable and distinctive brand identity has become increasingly apparent, leading many companies to recognize the importance of incorporating sound. Notable examples include Mastercard's recent introduction of a new sonic logo, Intel's iconic five-note jingle, the widely recognized Netflix *Ta-Dum*, and the legendary Metro-Goldwyn-Mayer lion roar. Furthermore, given the decreasing attention spans of consumers, the use of sound has become even more essential in capturing their attention and creating engaging experiences.

However, sound branding is still a relatively new field in marketing research, and there is much to explore. Previous literature has primarily focused on the role of sound branding in terms of in-store atmospheric music, songs, jingles in advertising, and the characteristics of sound logos when considered in isolation. In contrast, the present research aims to demonstrate that the usage of sound logos can contribute to positive brand perception and establish a strong bond with customers. Consequently, this research seeks to make three significant contributions.

Firstly, we aim to demonstrate that the use of sound logos, whether alone or in conjunction with visual logos, can have a positive impact on brand perception. Secondly, sound logos should not be seen as standalone brand elements but as integral components of a comprehensive branding strategy. Therefore, we aim to show that sound logos possess aesthetic value (Hagtvedt, 2022) and that their interaction with visual logos influences consumers' brand perception, thereby expanding our knowledge of multimodality (Grewal et al., 2022). Lastly, we aim to emphasize the managerial relevance of sonic identities. By providing evidence of the importance of integrating sound into branding strategies, brand managers can gain a better understanding of the interplay between visual and sonic identities and the value of investing in them.

Previous research indicates that incorporating sound elements is a promising direction in branding strategies (Gustafsson, 2019), as it has been shown to influence consumers (Graakjær, 2013) and brand attitudes (Park and Young, 1986). Audio branding is an integral and essential aspect of corporate identity (Jackson, 2003), as it provides meaning, recognition, and communicates the brand's values (Barbeito Veloso et al., 2019; Barrio Fraile et al., 2021). To be effective, sound logos should be unique, memorable, and recognizable (Anzenbacher, 2012), with the aim of fostering consumer loyalty (Fulberg, 2003) and using music to convey the brand's story (Westermann, 2008).

The use of sonic branding also aligns with Kotler's (1974) concept of "marketing of the senses" (Hultén et al., 2008; Krishna, 2013). Although it can be challenging to make a brand heard and understood in environments where consumers are bombarded with multiple stimuli (Nufer & Moser, 2018), sound branding has the power to ensure brand consistency regardless of the consumer's encounter with the brand (Jackson, 2003). Brand identity is a multimodal and interdisciplinary field where sound and visual elements work together to communicate brand features, values, and shape perception (Barrio Fraile et al., 2021). Efforts and investments in sound branding strategies should primarily focus on establishing recognizable sonic identities and sound logos (Mas et al., 2020). When consumers are unfamiliar with a brand, they lack the mental framework needed to interpret the stimuli (Morgan et al., 2021). Familiarity with the brand and its identity elements can increase ease of processing, liking, and positive perception, while unfamiliarity can have the opposite effect (Lee & Labroo, 2004).

The present research aims to provide a comprehensive framework for understanding and implementing sonic identity in companies' branding strategies. It is widely acknowledged that sensory stimuli, including sound, play a crucial role in shaping consumers' brand perception, as sound resonates deeply with our emotions. Therefore, sound has the potential to influence consumers' perceptions at a subconscious level. Consequently, we hypothesize that the usage of sound logos has a significant impact on consumers' brand perception, fostering an emotional connection and conveying a positive perception of the brand (**H1**).

Moreover, the integration of sound and visual elements in branding strategies contributes to creating a multisensory experience that engages consumers on multiple levels. When sound and visual elements are combined, they can enhance each other's aesthetic impact (Hagtvedt, 2022) and create greater integration in memory (Grewal et al., 2021).

Therefore, the interplay between sound logos and visual logos becomes a critical aspect to explore, as multimodal communication significantly influences consumers' perceptions and attitudes (Grewal et al., 2022). Hence, we hypothesize that the interplay between sound logos and visual logos moderates the effect of sound logos on consumers' brand perception (**H2**).

Consumers' ability to understand and interpret information about a brand evolves over time as they gain more knowledge and experience with the brand (Heilman et al., 2000). Lack of knowledge about a brand hinders consumers from correctly processing logos due to the absence of a relevant mental framework (Morgan et al., 2021). Therefore, we hypothesize that brand familiarity mediates the main effect on consumers' brand perception (**H3**).

To test these hypotheses, a survey design was employed to collect data from 339 participants (M_{age}=33.83, .61 female, .92 Italians). The survey consisted of two sections: demographic information, and participants' familiarity and perception of five brands (HSBC, T-Mobile, LG, Audi, and Netflix) using their respective brand logos. Brand familiarity and perception were measured using rating scales, and three versions of the logos were presented: sound logo, visual logo, or multimodal logo (sound and visual combined). The study followed a 3x3 conditions study design, taking brand familiarity into account.

Data analysis involved descriptive statistics, analyses of variances, logistic regressions, and correlation analyses. The first hypothesis tested the relationship between the usage of sound logos and the creation of an emotional bond that conveys positive brand perception. The second hypothesis investigated whether the interplay between sound logos and visual logos moderates the effect on brand perception. Lastly, the third hypothesis explored the mediating role of brand familiarity in consumer brand perception.

The analysis provided valuable insights into the relationship between logo type, familiarity, and brand perception. While the direct effects of logo variations on brand perception were not statistically significant, brand familiarity emerged as a critical factor in shaping brand perception. Familiarity played a more substantial role than exposure to specific logo types. Thus, pre-existing brand knowledge and familiarity exerted a stronger influence on perception than the specific characteristics of logos alone.

In conclusion, our analysis provides compelling evidence supporting the first hypothesis, indicating that the usage of sound logos significantly contributes to positive brand perception and establishes an emotional bond with consumers. However, the second hypothesis, which proposed that the interplay between sound and visual logos moderates the

effect on brand perception, did not yield statistically significant results. Nonetheless, the third hypothesis was strongly supported, emphasizing the pivotal mediating role of brand familiarity in shaping consumers' brand perception. High levels of brand familiarity were particularly important for confirming the first hypothesis.

Summary of hypotheses results

	Hypothesis	**Result**	**Comments**
H1	The usage of sound logos drives companies' brand identity and creates an emotional bond able to convey a positive consumer's brand perception.	confirmed	The analyses on brand perception for the different logo conditions demonstrates that sound logos always conveys positive perception when familiarity is high, and sometimes also for lower familiarity levels.
H2	The interplay between sound logo and visual logo moderates the effect of sound logo on consumers' brand perception.	not confirmed	Lack in statistical significance among logo conditions makes not possible to confirm the moderator effect of multimodality on brand perception.
H3	Brand familiarity mediates the main effect on consumer brand perception.	confirmed	All the analysis on brand familiarity lead to a 99.9% of significance of its effect on brand perception, also assuming a fundamental pivotal mediating role on logo condition.

Our findings offer valuable insights for both academic researchers and marketing practitioners. They highlight the significance of sound logos as a powerful and strategic tool in brand communication, capable of driving positive consumer perception. By leveraging the emotive capabilities of music (Arning & Gordon, 2006), sound logos can establish brand identity (Jackson, 2003) and create a unique brand experience. This underscores the need for marketers to recognize sound as an essential component in their branding strategies.

Furthermore, our study contributes to the understanding of multimodality in branding by investigating the interplay between sound and visual logos. While we did not find support for the moderating effect of logo interaction, our results encourage further exploration of theoretical models that encompass the intricate dynamics between different sensory cues in the branding context. This aligns with prior research on multimodality (Grewal et al., 2022; Vroomen and De Gelder, 2000) and emphasizes the need to continue studying the relationship between sound and visual elements in brand communication. Additionally, our research highlights the mediating role of brand familiarity in shaping the relationship between logo types and brand perception (Morgan et al., 2021). Building brand familiarity lays a strong foundation for positive brand perception, fosters brand trust, and cultivates long-term customer loyalty, ultimately bolstering brand equity.

From a managerial perspective, our findings underscore the importance of integrating sound logos into branding strategies. Marketers should carefully align sound logos with brand identity and purposefully evoke desired consumer responses, as advocated in previous research on sound logo design (Mas, 2019; Kim, 2020).

While our study provides valuable insights into the impact of sound logos, multimodality, and brand familiarity on consumers' brand perception, it is essential to acknowledge its limitations. Firstly, our reliance on existing brands may introduce biases and preconceived notions associated with participants' prior knowledge and experiences. Future research could mitigate these influences by employing fictional brands, ensuring a more neutral starting point. Additionally, incorporating additional measures to verify participants' actual level of brand familiarity would enhance the reliability of our findings.

Further exploration is warranted to examine the coherence between sound and visual elements in multimodal logos. Investigating the congruence between these components would deepen our understanding of their influence on brand perception. Moreover, the role of synesthesia in the processing and integration of sound and visual logos represents a promising area for future investigation, as it offers a unique perspective on the interplay of sensory cues in branding. Future research could also explore how different logo characteristics influence brand perception through ease of processing and understanding. The impact of sound and visual stimuli's multimodality on perceptual and conceptual fluency is another avenue worth exploring (Morgan et al., 2021). Additionally, conducting studies in controlled environments, such as in-person experiments, would address limitations associated with online surveys, affording researchers more control over potential confounding factors and environmental influences.

In conclusion, our research draws attention to the field of audio branding and highlights the significant role of sound logos in influencing consumers' brand perception. We have contributed to the understanding of sonic identities in branding strategies, the interplay between sound and visual elements, and the mediating role of brand familiarity. Embracing sound branding can empower brands to enhance their brand identity, strengthen connections with consumers, and drive success in the marketplace.