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# **Will brands with dynamic logos appear more authentic in the metaverse?**

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Master of Arts by Research

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York Business School

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# ABSTRACT

In recent years, there has been a notable increase in brands' interest in entering the metaverse, driven by its enormous potential predicted for the years to come. However, since brand authenticity is key to brand success, it is essential to understand consumers' perception of brand authenticity in the metaverse. This study aims to provide empirical evidence on whether companies should move beyond their traditional visual identities, based on rigid norms, and adopt flexible and adaptable ones to be perceived as authentic brands in the metaverse, thereby "fitting in" and meeting consumers' expectations. Specifically, this study examines in the metaverse how dynamic logos (flexible, adaptable, and evolving) influence the perception of brand authenticity, and the role of brand visual consistency, brand excitement, and the sense of flow. To this end, an experiment was conducted in the metaverse, where a total of 346 participants were randomly assigned to explore one of two spaces that differed only in the logo displayed (static or dynamic) and then completed a questionnaire assessing brand perceptions and flow. This research found new original links between dynamic vs static logos and brand excitement, original full mediation effect of logos on brand authenticity via brand excitement and a new fact that dynamic logos appear visually consistent in the metaverse. Furthermore, this study makes practical contributions to branding practitioners looking to create future-ready brands to stay at the forefront of the market and new trends driven by emerging technologies: brands should use dynamic logos in the metaverse as they are perceived as visually consistent, and make the brand appear more exciting and authentic.

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# ABBREVIATIONS

2D: two dimensions or two-dimensional

3D: three dimensions or three-dimensional

AI: artificial intelligence

AR: augmented reality

CVI: corporate visual identity

DV: dependent variable

IRL: in real life

IV: independent variable

MedV: mediating variable

ModV: moderating variable

RQ: research question

UGC: user-generated content

VI: visual identity

VIS: visual identity system

VR: virtual reality

# 1. INTRODUCTION

This research investigated whether dynamic logos (flexible, evolving, and adaptable) help brands to be perceived as more authentic in the metaverse, while testing the role played by brand visual consistency, the excitement dimension of brand personality (or brand excitement), and the sense of flow that consumers experienced in immersive virtual environments, and the relationship among them.

The term metaverse was first mentioned in the science fiction novel *Snow Crash* (Stephenson, 1992). Since then, the concept has been used to describe an immersive 3D virtual space (Hollensen, Kotler and Opresnik, 2023), where people from different physical locations can be present simultaneously in the same space (Bosworth and Clegg, 2021; Lim *et al.*, 2025), adopting an avatar as a digital identity to interact and engage with others, entities and environments (Hollensen, Kotler and Opresnik, 2023) to socialise, participate in leisure and work-related activities, among many other virtual experiences (Bosworth and Clegg, 2021), in a persistent way (Lim *et al.*, 2025), which is a key feature that differentiates the metaverse from other types of environments using virtual reality (VR), or from traditional video games, due to its continuous and persistent existence.

The definition of the metaverse has not yet reached consensus, as it is still under development and evolving (Hackl, Lueth and Di Bartolo, 2022), being also widely defined as the evolution of the internet (Dwivedi *et al.*, 2024; Lim *et al.*, 2025), in which instead of just watching and reading two-dimensions (2D) content, people actively participate in this new immersive three-dimensions (3D) internet (Forbes Technology Council, 2023; Bilgihan *et al.*, 2024).

The number of users seeking virtual experiences in the metaverse increased considerably due to COVID-19, when people felt the need to use virtual immersive worlds for various activities, such as socialising, entertaining, shopping, working or virtual tourism (Hollensen, Kotler and Opresnik, 2023; Koohang *et al.*, 2023; Wongkitrungrueng and Suprawan, 2024; Lim *et al.*, 2025). This led to an exploration of the virtual world beyond entertainment purposes, expanding its use, perhaps seeking to replace the pandemic-stricken and therefore the restrictive real world of that period with a free virtual world. After the pandemic, in October 2021, the tech giant Facebook was renamed Meta, which led to the term metaverse becoming a buzzword. It became more relevant for brands, although some

brands had already been exploring the commercial potential of pioneering platforms such as Second Life since the early 2000s (Wongkitrungrueng and Suprawan, 2024), and the enormous potential of the metaverse for brands has begun to be highlighted in several business and marketing publications, such as McKinsey & Company (2022, p. 57) report stating that “with its potential to generate up to \$5 trillion in value by 2030, the metaverse is simply too big to be ignored”.

The metaverse offers several key benefits for brands. First, it can provide an innovative interactive experience for consumers, allowing them to participate actively through activities such as co-creation, customisation, gaming, or social interaction, rather than just scrolling through images in 2D non-immersive virtual environments (Bilgihan *et al.*, 2024). In addition, as the metaverse lacks physical laws, it can allow brands to create unique and highly creative brand activations that would be unthinkable in real life (IRL) (Dwivedi *et al.*, 2023). Another advantage is the ability to replicate the real world, creating digital twins that mirror real-life objects/products (Dwivedi *et al.*, 2022).

Despite the great opportunities that the metaverse offers companies, entering the metaverse is not straightforward for brands, because most of them have been developed for physical and 2D digital environments. Thus, they can struggle to fit into these new 3D immersive virtual environments, which is why they need to have the ability to build and adapt strategies that allow brands to be perceived as consistent in virtual and in real life (Dwivedi *et al.*, 2023).

In terms of the importance of the perception of brand visual consistency, it has become essential to understand its contemporary meaning and relevance, and thereby how the paradigm shift that allows for flexibility is key to underpinning the development of adaptive and evolving brands, and the potential positive influence of visual consistency on the perception of brand authenticity in this new virtual era. In the traditional paradigm, visual identity should follow uniformity for the brand to be considered consistent, while the alternative paradigm allows for some inconsistencies (Gregersen and Johansen, 2022), suggesting flexible brands can still be recognised (Sääksjärvi *et al.*, 2015) and achieve success, questioning the traditional paradigm of consistency (Gregersen and Johansen, 2018).

This alternative paradigm opens an opportunity for companies to develop flexible brands, as today's visual identities need to adapt to this evolving technological landscape as well by moving from print to digital, and therefore, from traditional to dynamic design, with change

being an integral part of their growth as living systems (Van Nes, 2012; Gamal Ali Salem and Mohamed Mohamed Abouelnaga, 2022). Likewise, Hsu (2014) suggests that, as never before, brand identities need to adapt to evolving media platforms.

To address this, brands with dynamic logos, which are flexible to allow adaptation and evolution and act as “being alive”, may be the best response to current and future brand's needs, as companies are ever-evolving and constantly adapting to internal and external changes (Van Nes, 2012), specially to technological advances (Gamal Ali Salem and Mohamed Mohamed Abouelnaga, 2022), while ensuring the brand remains relevant and up-to-date in the market (Lelis, 2019). Thus, dynamic logos differ from the traditional static logos, which follow strict and rigid norms stated on brand manuals, in the ability to change and adapt to different formats, environments, technological advancement and trends. Brands such as Renault and MTV are just a few examples of many others using dynamic logos.

### Examples of dynamic logos

The century-old car brand Renault has become fluid. Redesigned by Landor in 2021, the iconic diamond, for the first time in its history, stands alone, separate from the wordmark. Reimagined to reflect Renault's commitment to innovation, the design adapts to the changing modern global landscape, symbolizing a sense of perpetual motion (Landor, 2021).

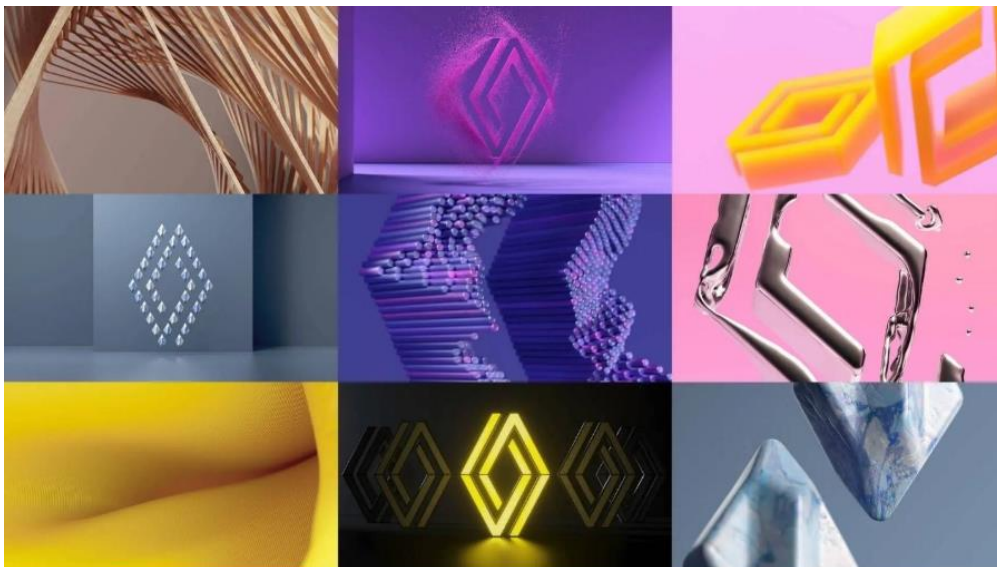


Figure 1: Renault logo. Source: Landor (2021). Image reproduced for academic purposes only.

The MTV dynamic logo was designed in the '80s by Manhattan Design and is still being used today. With more than 40 years of history, this dynamic logo has been able to adapt to

a fast-changing video music market, trends and its young audience, staying contemporary and relevant (Santos, Dias and Rodriguez Campo, 2013); even broadening its market, including others type of tv content, enduring across generations and remaining as an icon of the pop culture (Axies Digital, 2023).



Figure 2: MTV logo (applied on different merchandising products). Source: Paramount Shop (2025). Image reproduced for academic purposes only.

The logo has been widely described in the literature as the main element of brand visual identity, and has been studied in a wide range of aspects (Van Riel & Van Den Ban, 2001; Fajardo, Zhang and Tsiros, 2016; Kelly, 2017; Luffarelli, Mukesh and Mahmood, 2019; Lelis *et al.*, 2022); however, there is a lack of research on dynamic logos, and in different scenarios such as in the context of the metaverse. Following this same vein, gaps emerge from Kim and Lim (2019) regarding consumer perception of logo variation in various environments and suggesting future research on how logo presence should be successfully addressed across different marketing channels, which can vary between digital and physical realms.

Before conducting this research, I wondered whether dynamic logos could be an asset brands can use to be successful in the metaverse. Evolving in consonance with the market, while showing their capability and willingness to adapt, is essential to be perceived as authentic in today's world (Campagna, Donthu and Yoo, 2023), with consumers making brand choices based on brand trust (Neumeier, 2003) driven by perception of brand

authenticity (Bruhn *et al.*, 2012; Eggers *et al.*, 2013; Forbes Business Council, 2023). That makes authenticity highly valuable for today's consumers (NielsenIQ, 2024) and, as a consequence, a key factor for brand success (Bruhn *et al.*, 2012; Schallehn, Burmann and Riley, 2014; Hernandez-Fernandez and Lewis, 2019).

Therefore, understanding how consumers perceive brand authenticity in the metaverse is critical to face this rapidly evolving market scenario. To examine what influences this perception, the excitement dimension of brand personality characterised by traits such as "daring, spirited, imaginative, and up-to-date", as was proposed by Aaker (1997, p. 351), or also referred as brand excitement in this study, emerged as an influential variable in the positive perception of brand authenticity in the metaverse. Brands with dynamic logos could be perceived as exciting, because of their flexible and dynamic nature, which may lead to a positive perception of brand authenticity. This is likely because dynamic logos better "fit in" the metaverse and consumers' expectations of it, which can be explained by self and collective identification with the brand, following the Social Identity Theory (Tajfel, 2010). In a contemporary context, this would mean adapting to evolve at the same pace with market demands and trends.

Previous studies show that in immersive virtual environments people tend to experience a sense of flow. According to the Flow Theory (Csíkszentmihályi, 1975) the sense of flow is a state of deep enjoyment people experience when they feel fully immersed in an activity, feeling as if they are truly there, while losing track of time. As flow can influence brand perceptions (Nah, Eschenbrenner and DeWester, 2011; Kulviwat *et al.*, 2016; Hooker *et al.*, 2019), this study investigated the role of flow in consumer perception of brand excitement and authenticity and in relation to brand logos in the metaverse.

Since the metaverse is still in its early stage, conducting research on branding in the metaverse today, particularly on how to successfully design visual identities understanding the difficulty brands face in adapting to the metaverse is highly relevant. According to Dwivedi *et al.* (2023), marketing professionals are advised to begin building strategies early to be ready before mass uptake, as the metaverse is poised to bring a positive impact to companies in branding, marketing and commercial purposes. In addition, as branding specialists do not have the information necessary to successfully approach this matter due to the lack of research on this topic, and even more in the contemporary virtual immersive scenario (Barrera and Shah, 2023), companies started using the metaverse to test and learn. For example, Gucci, according to Robert Triefus, Chief Executive Officer of Gucci Vault and Metaverse Ventures (The Business of Fashion, 2023) did, following a recurring

piece of advice found in the literature (e.g., Deloitte Development LLC., 2022), for IRL companies to use the metaverse as a place of experimentation, especially with the youngest audience (Hollensen, Kotler and Opresnik, 2023).

Therefore, this study aims to address the lack of research on branding in contemporary immersive virtual worlds. Given that the metaverse is still under development, it is relevant to note that it currently consists of several different and independent immersive virtual platforms such as Roblox, Decentraland, and others (Koohang *et al.*, 2023), contrasting with some literature (e.g., Golf-Papez *et al.*, 2022; Buhalis, Leung and Lin, 2023) that defines the metaverse in the present tense as an interconnected and interoperable virtual space, when in fact, those characteristics are future goals (Cheah and Shimul, 2023). Hence, previous experimental studies used a single metaverse platform, most of them Second Life (e.g., Nah, Eschenbrenner and DeWester, 2011; Barnes, Mattsson and Hartley, 2015), the first virtual world released in 2003 (Linden Research, Inc., 2025). In many other studies, rather than experiencing the metaverse, participants watched immersive videos (e.g., Van Kerrebroeck, Brengman and Willems, 2017; De Regt, Plangger and Barnes, 2021; Lee and Cho, 2023) and were asked to imagine being in the virtual environment rather than experiencing it, which makes their results questionable.

This study is relevant because, as more brands join the metaverse, as evidenced by the significant increase in brands entering virtual worlds in 2024 (GEEIQ, 2025), in the coming years it is expected that most brands will continue entering there. Therefore, understanding how to maintain brand authenticity in the metaverse will be key to brand success.

### **Examples of brands in the metaverse:**

Boss created “Boss Immersive Showroom” in Spatial.io to participate in the 2023 Metaverse Fashion Week, presenting its spring-summer collection. Participants were invited to explore this gamified virtual brand experience and redeem a prize consisting of a Boss suit for their avatars after completing a quest. The space was also connected with the brand online store to buy some of the products showcased in the space.



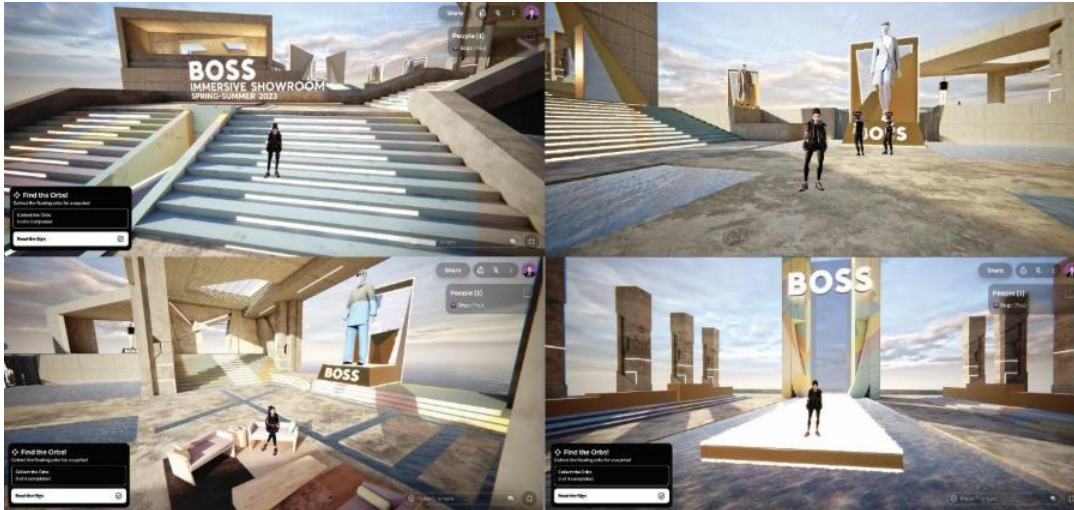


Figure 3: Hugo Boss (2023) BOSS Immersive Showroom. In Spatial.io.

Alo Yoga brand recently updated in July 2025 its Alo Sanctuary virtual experience in Roblox, to workout, learn yoga positions, relax in an icetube or taking a meditation session, with a series of limited branded UGC (user-generated content) items to claims for free.



Figure 4: Alo Yoga (2025) Alo Sanctuary. In Roblox.

After conducting a critical analysis of the existing literature, it was possible to synthesise the main issue that companies face when they need to adapt their brands to enter the metaverse, in the following question: how should brands adapt their brand strategies and visual identities to be perceived as authentic in the metaverse? Leading to conducting an experimental study aiming to answer the research question (RQ): How do dynamic brand logos within the metaverse influence consumers' perception of brand authenticity? And the potential influence of brand visual consistency, brand excitement, and flow. By

experimenting in a contemporary metaverse platform already used by major brands, using a quantitative approach, and collecting data from 346 participants who answered a questionnaire after experiencing a branded metaverse space, this study aimed to collect evidence to test a series of hypotheses (see Chapter 3) to assesses in the metaverse consumers' perception of brand authenticity, brand visual consistency, brand excitement, the sense of flow, and relationships among them, which are further explained in Chapter 3. This should help companies adapt their brands to successfully entering the metaverse while maintaining consistency and authenticity.

This study made novel contributions to the literature on these consumer brand perceptions in the metaverse and their relationship, which are further explained in Chapter 6.1. And because today we are building the future, this research also presents practical contributions based on empirical evidence to help branding practitioners develop future-ready brands that can adapt to this fast-evolving technological market scenario while being perceived as authentic.

## 2.LITERATURE REVIEW

This review aims to explore the existing literature on the interrelated themes proposed in the conceptual framework (see Figure 5) examining their relevance, relationship, and influence. Figure 5 illustrates the link between the type of logo and brand authenticity, mediated by visual consistency and brand personality (excitement), and moderated by flow. The thematic structure begins with an overview of the relatively new area of research on branding in the metaverse, then focuses on the introduction of the logo and its brand-identifying function, continuing with the importance of the dynamic versus static logo for the current and future branding scenario, followed by the role of brand visual consistency, and the different viewpoints on brand authenticity found in the literature. It then includes the brand personality trait of excitement and its relationship with the dynamic nature of the metaverse, dynamic logos, and the potential impact on brand authenticity perception. Furthermore, it explores Flow Theory as a factor that may moderate consumer perceptions within the metaverse. The literature review concludes with the summary of the hypotheses and the knowledge gap.

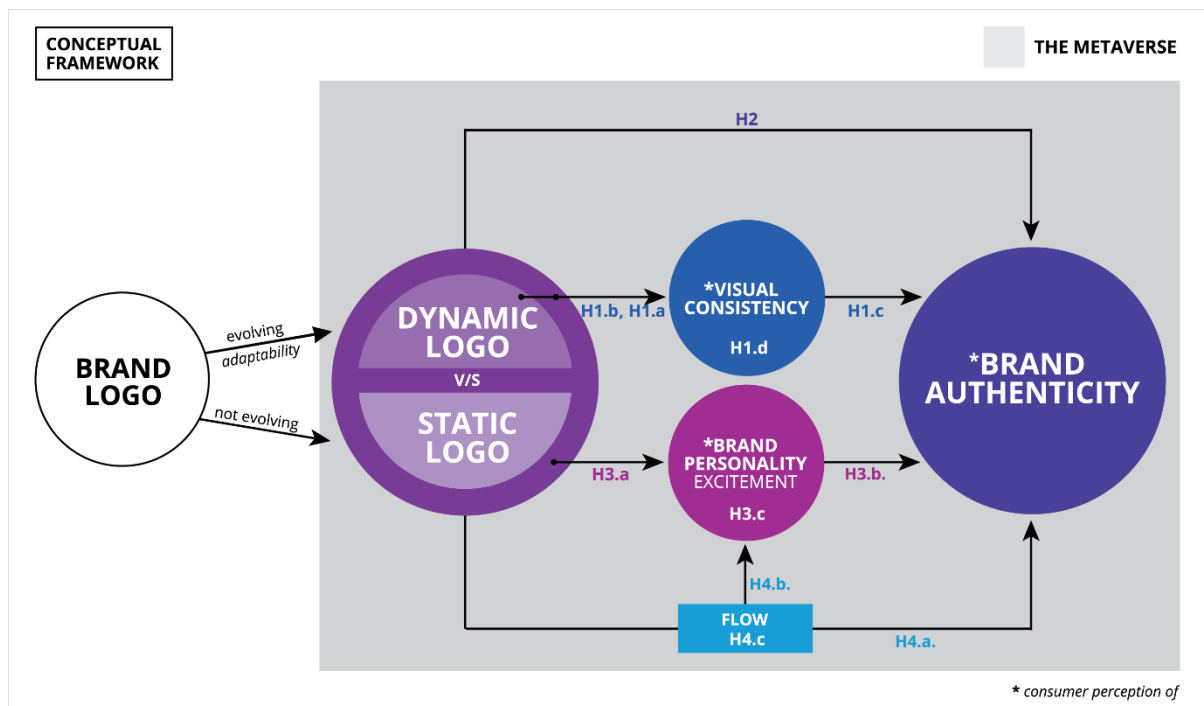


Figure 5: Conceptual Framework

### 2.1 STUDYING THE METAVERSE: THE FUTURE OF BRANDING

The metaverse has been extensively defined as the evolution of the internet: in 3D, immersive, interactive, and in real-time (Forbes Technology Council, 2023; Dwivedi *et al.*, 2024; Lim *et al.*, 2025). Within this immersive virtual space individuals can participate in

various activities and socialise using avatars (Hackl, Lueth and Di Bartolo, 2022), which differentiates the metaverse from mere VR spaces, where they do not have a digital character to embody them (Van Kerrebroeck, Brengman and Willems, 2017). In addition, a broader vision, positioning the metaverse between digital and real life as a blended realm where both coexist, allowing individuals to merge their digital and real-life dimensions (Dwivedi *et al.*, 2022; Hackl, Lueth and Di Bartolo, 2022). Ultimately, the metaverse is opening a disruptive branding landscape, reshaping the brand-consumer interaction (Dwivedi *et al.*, 2022; Cheah and Shimul, 2023; Koohang *et al.*, 2023; Lim *et al.*, 2025).

Previous studies agree on the positive potential of the metaverse for brands due to its highly immersive, interactive, and innovative nature, providing brands with unprecedented opportunities to explore novel types of brand experiences to influence consumers perceptions and responses (Dwivedi *et al.*, 2023; Lim *et al.*, 2025). For instance, the study of Gabisch and Gwebu (2011) shows that setting up a brand presence in the virtual world can induce consumers to choose that brand IRL. Likewise, contemporary research conducted by Pizzi, Vannucci and Aiello (2020) supports that favourable consumer brand attitudes after experiencing a retail brand virtual space extend to other brand touchpoints. Therefore, it is essential to uncover how to achieve the potentially positive impact of the metaverse on branding.

Although research on branding in immersive virtual worlds has not been extensive, it has been experiencing a rise over the last few years (Dwivedi *et al.*, 2023). However, due to the fast-changing technology, past studies have a narrow coverage and seem to be out-of-date or obsolete; as a result, there is a lack of research in the current scenario (Barrera and Shah, 2023) confirming the idea of the metaverse could be positive for brands (Wongkitrungrueng and Suprawan, 2024). Thus, Dwivedi *et al.* (2023) suggest a list for future research specifying experiments as one of the proposed methods to analyse the wide range of conditions that could potentially lead to a positive impact of immersive virtual environments on branding. A suggestion that has been adopted in this study by conducting an experiment in the metaverse, to measure the effect of dynamic vs static logo on consumers' perceptions of brand authenticity, and its relation to brand excitement, brand visual consistency and the experienced state of flow. Likewise, Rosado-Pinto and Loureiro (2024) suggest augmented reality (AR) and virtual reality (VR) experiments as a research method for future studies, although with a more specific objective, which seeks to understand the evolution of individuals' perceptions of brand authenticity.

In addition, Bilgihan *et al.* (2024) also suggest further research into the potential of the metaverse to shape brand strategies adapted to this immersive environment, as the influence of the metaverse on the brands within it is yet to be fully unveiled. They propose a six-step method for creating and adapting marketing strategies applicable to metaverse brand experiences; however, this method does not formally include a fundamental step regarding the creation or adaptation of brand visual identity to fit into immersive 3D virtual worlds. According to Bilgihan *et al.* (2024), brand engagement in the metaverse differs from the commonly used 2D digital environments such as websites and social media due to the metaverse's particular immersiveness and interactivity. Thus, this model calls for leveraging the unique characteristics of the metaverse through the completion of six steps: "Brand Strategy and Objective Setting, Metaverse Platform Selection, Content Creation and Brand Messaging, Metaverse Engagement Activities, Measurement and Analytics, and Review and Refine" (Bilgihan *et al.*, 2024, p. 4). To emphasise the relevance of this missing step, Huang and Zheng (2023) found that consumers identify brands first visually; thus, visual elements outperform verbal, non-verbal, or written communication. In addition, they conclude that nowadays, consumers tend to remember businesses mainly by their visual identity; hence, having a well-designed brand is crucial to remain competitive in the market. Therefore, it is clear that visual identity is a fundamental aspect that must be included as a step to complete the proposed sequence.

However, to approach branding in the metaverse, it is important to highlight that although it is created using technology and experienced through human-computer interaction (Nah, Eschenbrenner and DeWester, 2011), tech-driven facilitated experiences are enhanced by characteristics more aligned with in-person experiences due to the immersiveness and the feeling of being close to reality (Huang and Zheng, 2023; Lee and Cho, 2023). Consequently, as technology plays a role in the consumer perception effect, differentiating it from the IRL scenario, branding in the metaverse is not straightforward, as evidenced by the failed attempts of many brands (Barnes, Mattsson and Hartley, 2015). In this context, Lee and Cho (2023) surprisingly found that in the metaverse, the mediating variable of engagement does not significantly affect brand perception on its own, suggesting that this is due to the nature of the brand engagement in the metaverse, differing from other more passive brand-consumer interactions, which means that despite users experience brand engagement in the metaverse this could be not enough to influence positive consumers' brand perceptions. Therefore, other factors potentially influencing consumer emotions and attitudes, such as the sense of flow, could be considered (Lim *et al.*, 2025).

Overall, as the metaverse emerges as the future of branding with the potential to disrupt the current scenario once widespread adoption occurs (Cheah and Shimul, 2023; Lim *et al.*, 2025), It undoubtedly requires a deeper understanding of consumers' brand perception and behavior within it, where virtual lives (technology-based) and real ones merge, revealing a more complex brand-consumer interaction, to help brands successfully enter and evolve in this burgeoning virtual era, through specifically created or adapted branding strategies and visual identities.

## 2.2 THE IMPORTANCE OF LOGOS IN BRANDING

The study conducted by Foroudi, Melewar and Gupta (2017) suggests that companies have been using logos since 1760 to improve brand recognition and differentiate them from competitors; however, there is no consensus on the definition of a logo or its main elements. Likewise, Kim and Lim (2019) suggest that past research on logos has different viewpoints despite the widespread adoption of logos and their evident importance. However, the same study argues that there is a point of agreement in the existing literature on logos being essential for companies as a key part of their corporate visual identity (CVI).

To highlight the importance of logos, according to Fajardo, Zhang and Tsiros (2016), the logo plays a crucial role in the consumer's brand impression, interpretation, associations, and feelings based on their brand experiences. Likewise, according to Foroudi, Melewar and Gupta (2017), the logo is an important asset of the company; therefore, companies spend huge amounts of money and time on designing and applying their logos (Van Riel and Van Den Ban, 2001; Melewar, Bassett and Simes, 2006). This is because a corporate logo is more than a mere graphic representation of a company, as it is the central component of the visual identity (VI) capable of triggering emotions, being, therefore, a multifaceted and strategic tool, where each element is interconnected and closely linked, being essential in shaping the brand image (Foroudi, Melewar and Gupta, 2017). In addition, VI or CVI has been defined as the visual expression of the organization (Van den Bosch, De Jong and Elving, 2005), which includes a set of elements that visually identify the brand, allowing it to be easily recognised and differentiated from the competition while creating meaningful perceptions among its audience (Beverland and Cankurtaran, 2024), including the visual applications of the brand on every touchpoint, from print to digital media (Gregersen and Johansen, 2018). There is a broad consensus in the literature on the main elements of visual identity, including the logo, colors, and typography, and secondary elements like tagline, imagery, pattern, and iconography (Van Den Bosch, de Jong and Elving, 2005; Gregersen and Johansen, 2018; Wheeler and Meyerson, 2024).



The principal function of logos is identification; therefore, it is not to visually communicate the brand (Haviv, 2018, 20:20). Although seemingly simple, this statement surprisingly generates different interpretations and misconceptions. These different viewpoints often derive from differing opinions on the role attributed to the logo. For instance, according to Haviv (2017), some company managers expect their logo to “speak”, and thus, communicate the company's story, its offerings, or any other information, even thinking that logos should convey feelings. Therefore, they imbue the logo with meaning as a communication tool; however, it is enough for the logo to be at every touchpoint to become, after a while, identified as the brand. Over the logo's lifetime this exposure imbues the logo with a series of associations and feelings that people have towards the brand. Similarly, Slade-Brooking (2016) defines the logo as a clear and concise visual representation of the brand proposition. Hence, the identifying function of the logo is more about representation than communication. Communication, instead, is carried out by other elements within the corporate identity system, specifically designed for that purpose. Therefore, as identification involves the perception and association of a logo with a brand, the following question arises: how is a logo perceived and associated with a brand?

To answer this question, it is necessary to understand the relevance of semiotics in logos, as Skaggs (2018, p. 321) emphasizes that in a logo, rather than looking for symbolic meaning, the singularity of the form versus that of its competitors should be paramount; noting that for instance, our first impression must be of the circle as a shape distinct from that of its competitors, and only then will we associate the circle with the sun (and thus with a company called “Sun, Inc.”). Therefore, what matters here is not the symbolic reference the logo may have (such as the sun represented by the circle) but its uniqueness. Over time, people begin to associate the logo with the company, not because of its metaphorical meaning but for its shape, which differentiates it from other brands, and because of the repetitive exposure of the logo at consumer touchpoints. Likewise, Wheeler and Meyerson (2024) explain that people first process and retain shapes, followed by colours, and then forms.

Logos must adapt to follow the evolution of the brand and the market, from subtle changes that maintain their legacy while constantly evolving (e.g., Pepsi) or by disruptive changes (Wheeler and Meyerson, 2024) such as a more drastic rebranding (e.g., GSK (Glaxo Smith Kline) rebrand in 2022). Due to technological evolution and the boom of social media, brands had the need to adapt to these new digital formats, which, unlike print media, these interactive and hyper-visual channels require more dynamism in the search for a more appealing visual identity. Consequently, animated visual brand elements have become

essential for brands seeking a novel way to present their brand identity and communicate their offerings (Das, 2024), which could be argued based on empirical evidence from Bottini, Khajavi and Gonzalez (2018) showing logos in-motion appear as more visually attractive than static ones, effectively captivating their audience's attention by eliciting excitement. Likewise, Jun and Lee (2020) show in their study that people tend to choose this type of logo, arguing that the main important reason is that they are eye-catching. However, this study also highlights that animated logos have the disadvantage of being limited to digital devices and the time people have to spend to see the fully displayed logo, which suggests that they should be used only as a complement without replacing the static version. This study also provides evidence that an animated logo is perceived as exciting. Nevertheless, it does not mean that a logo in motion performs better than a static one.

As technologies keep evolving and audiences keep adopting them, brands cannot stop the evolution of their logos as they need to be constantly adapting to meet the new requirements imposed by the market. Today, the metaverse, enabled by VR technologies, is emerging as a new marketing channel; thus, once again, the logo has to adapt to it. In order to highlight the role of the logo in VR, according to the results of the quantitative and qualitative eye-tracking experiment conducted by Kim (2024), a brand logo in a virtual brand space significantly raises the duration of gaze fixation compared to the space without logo, and, in addition, they found individuals' emotional responses influenced by the logo.

## 2.3 DYNAMIC LOGOS: THE DYNAMIC FUTURE OF BRANDS

Dynamic brands represent a shift from traditional rigid visual identities that rely on fixed elements compiled in a document to standardise their use, to a modern perspective that emphasises adaptable, living, and evolving visual identity systems (VIS) (Van Nes, 2012; Gamal Ali Salem and Mohamed Mohamed Abouelnaga, 2022) developed with flexibility based on a mix of unchangeable and changeable elements working together (Felsing, 2010; Chaves *et al.*, 2019; Cunha *et al.*, 2021).

The first VIS based on strict rules was introduced by Behrens for AEG at the beginning of the 20th century. Since then, most graphic designers working in branding today have studied and currently use the traditional VIS. However, others have developed the concept of dynamic brands as an alternative paradigm, which has generated some debate in the existing literature as to whether the concept of dynamic brands is a trend (Hsu, 2014), as opposed to other studies suggesting that it is not a mere tendency (Murdock, 2016) and not a novelty (Martins *et al.*, 2019; Cunha *et al.*, 2021), which can be supported by history, which



shows that dynamic visual identities have been developed for decades. For instance, the “Designing Programmes” book launched in 1964 by Karl Gerstner presented dynamic visual identities such as the “Boîte à musique” (Gerstner, 2019); the MTV brand in the 80s was recognised for the disruptive logo-centred dynamic brand designed by Manhattan Design; and Google also adopted a dynamic logo back in 2000 with the international release of a Doodle to celebrate Bastille Day in France, since when it has continued to evolve, adapting to different cultures, events, and even the latest technologies by introducing the first VR-enabled Doodle in 2018 (Google, no date, para. 5 and 11). Therefore, designers and firms have been paying attention to the creation of dynamic brands by organisations claiming for a transformational and evolving identity, for being recognized as highly creative and modern, with a “youthful vibe” like MTV (Van Nes, 2012, p. 7), “Iconic and expressive” as the Philadelphia Museum of Art (Pentagram, 2023, para. 1) or multifaceted, being able to communicate various activities or services to a wide range of audiences e.g., the City of Melbourne (Jochum, 2013).

Nowadays, the new virtual era brings a new paradigm shift, challenging many, if not most, brands to adapt their traditionally designed VIS to the current and fast-moving digital landscape. Accordingly, brands can respond flexibly, even if it impacts their visual identities, to adapt effectively to this ever-changing market scenario whilst focusing on being present where their consumers are and where they are likely to be, as well as on their new communication and marketing channels (Lelis, 2019). Likewise, Wheeler and Meyerson (2024) suggest that flexibility is key to innovating and moving quickly in response to market evolution, and according to Scher (2024, 0:55), VIS with strict rules risk appearing monotonous, for this reason, brands that aspire to have a long lifespan need to allow flexibility. Hence, to be flexible and adaptable, according to Van Nes (2012), digital platforms, online networks, and technological advances provide brands with the potential to organically expand and generate updated versions over time, acting alive.

It is clear that brand identity embodies the visual representation of the brand, giving the first visual impression to consumers. Hence, in the contemporary digital age, it has become imperative to enhance visual identity by introducing a dynamic and evolving visual identity system (Siswanto and Dolah, 2019), which raises the question of how to approach it. In response, a wide range of models to establish dynamic visual identities have been proposed (e.g., Felsing, 2010; Jochum, 2013; Martins *et al.*, 2019; Corini, 2023). The most frequently named in the literature is the Van Nes (2012) model, designed to categorise the VIS according to their behaviours. It proposes a dynamic visual identity model with six design systems: Container, which is the most widely employed and uses the logo shape as a

container for different colours, patterns or textures; Wallpaper, which uses different backgrounds with an unchanged front layer; DNA, which uses a set of elements that are combined differently each time; Formula, which uses a sequence of rules; Custom, which leaves some elements customised while others remain unaffected; and Generative, which is the most technologically advanced, as it uses generative software to randomly create different versions following coded parameters.

Therefore, as the main element of a dynamic VIS, the dynamic logo can appear complex due to its flexibility, allowing different avenues to approach its design, which can lead people to misunderstand what a dynamic logo is. For instance, some people think that it refers to animated logos when instead, according to Van Nes (2012), they are merely static logos in motion and go on to argue that designing a dynamic visual identity needs significantly more flexibility than simply incorporating motion; while others interpret dynamic logos as software-generated logos, such as Siswanto and Dolah (2019), who rely on a technology-centric definition, using computer systems to randomly create a dynamic logo, an approach reduced to just one of the types of dynamic logo generated by an algorithm using a logo generator software.

To summarise, logos have been evolving from static and highly standardised printed versions, through today's digital media platforms, to continue into virtual immersive three-dimensional spaces, which require a new step beyond the current digital landscape that provides limited flat 2D images, short videos and text conversations. Consequently, brands must now adapt (Dwivedi *et al.*, 2023) to this new immersive and unconstrained environment where they have the potential to be highly creative, being able to develop dynamic and vivid visual identities with no limits other than those imposed by consistency.

## 2.4 THE ROLE OF CONSISTENCY

People may see a logo on different occasions over time (Kim and Lim, 2019). Therefore, to maintain consistency, the logo and the other elements of the visual identity have been systematically organised and standardised in a VIS, which also enhances consumers' ability to identify the brand visually (Lelis, 2019), and is detailed in a brand guideline document on how to apply the visual components of the brand on every touchpoint in a consistent way, so consumers can perceive familiarity, after the constant exposure to the brand (Skaggs, 2018).

Despite the importance of brand visual consistency, according to Van Den Bosch, Elving and De Jong (2006), there is a lack of studies on the effective ways to consistently implement the visual identity, and, as mentioned by Jordá-Albiñana *et al.* (2009), studies on this matter would be valuable. The most developed idea in the literature on consistency is that the brand should be visually consistent across all touchpoints, and according to Gregersen and Johansen (2018, 2022), this depends on the correct development, communication, and application of brand identity norm manuals and other tools to standardise and define graphic standards by managers responsible for the brand's visual identity. Regarding the role of the logo, as it is an important visual signifier, it can elicit positive consumer behaviour towards the brand when the brand acts consistently, as the repetition of the logo across different marketing channels reinforces the brand identity and increases the perception of brand familiarity in the subconscious of its consumers, which can be explained by the Schema Theory suggesting that a consistent repetition of the logo help to create a schema (a mental structure that triggers associations from linked ideas) in people's mind, making it easier to process, leading in positive perceptions (Kaur and Kaur, 2021), according to the Perceptual Fluency Theory (Kaur and Kaur, 2019).

However, according to Gregersen and Johansen (2022), despite there being a broad consensus suggesting that consistency is essential, some nuances around the levels of inconsistency are allowed. In the same line, Sääksjärvi *et al.* (2015) state that despite a common practice tip for brands to enhance their consistency is to always apply the main logo without variations, their study proved that a logo with versions or slight changes could work well for brands looking to innovate without rebranding (which can produce an unexpected impact) arguing that even if they could be perceived as less consistent, they are still recognisable, and at the same time, they can be perceived as a renewed brand while maintaining its identity, which is positive, concluding that contrary to the general idea about consistency in logos, they findings illustrates that logos do not necessarily have to remain strictly the same all the time. In line with those findings, Martins *et al.* (2019) suggest that the repetition of the logo is replaced by the idea of creating a design system that allows for variations without losing the logo's identifying visual characteristics. This contrasting viewpoint is being explored in the literature as a contraposition of the rigid arguments on brand consistency.

The debate is explored in the studio conducted by Gregersen and Johansen (2018), contrasting the two approaches on CVI consistency and CVI inconsistency, suggesting that on the one hand, those who favor consistency argue that it is essential for brands to be distinguished from its competitors, recognised and positively perceived as a brand that

behaves according on its promises and claims while maintaining a positive image. Likewise, Kaur and Kaur (2021) suggest that, according to existing research, brands that maintain consistency across all their touchpoints can positively impact consumers' ability to visually identify and recognise the brand's visual identity. This aligns with their findings, which also state that consistency is beneficial by influencing consumers' attitudes and brand image. On the other hand, Gregersen and Johansen (2018) state that there are contrasting arguments especially in terms of authenticity, suggesting that CVI should allow adaptation to show the natural evolution of the brand. In addition, they noted that the alternative point of view called into question the preconceived role of consistency in brand success, stated in most research, arguing the need for flexibility for adapting and evolving, and giving as an example Google and Airbnb using the logo and others brand elements in a dynamic way, therefore “inconsistent” according to the traditional literature, and yet are undoubtedly successful brands.

Understanding these two points of view, it is possible to conclude that achieving a balance between consistency and inconsistency is necessary to build brands capable of adapting and living in current and future scenarios, thereby reinterpreting the concept of brand visual consistency. Thus, consistency is crucial while allowing for some inconsistencies or changes to show flexibility and ability to adapt to new scenarios. Therefore, a “post-manual period” emerged as the best way to design and implement a VIS mixing dynamic and static visual brand elements (Gregersen and Johansen, 2018, p. 9) replacing the highly restrictive visual identity manuals to ensure consistency with guidelines instead of rules, allowing a more flexible CVI implementation.

Following the same premise, Neumeier (2003, p. 133) suggests that consistency is not synonymous with uniformity, and brands, like people, can change, being flexible and adaptable, as long as they retain the specific qualities or characteristics that identify the brand; hence, “brands can afford to be inconsistent” and still be recognisable. Kelly (2017) supports this idea by suggesting that companies often opt for static logos, unable to change or variate, in the belief that it is better to maintain brand consistency, without understanding the benefits of a dynamic logo, which offers a flexible design that can be expanded to suit various uses, enriching their brand identity.

Although dynamic logos can be traditionally considered inconsistent due to their flexibility, in most cases, they mix static and dynamic elements to maintain recognition (Van Nes, 2012; Jochum, 2013), varying in colour, typography, shape, or changing by rotation, position, or scale. Regarding colour, according to Lelis (2019), dynamic logos, instead of following rigid

colour palettes, adopt more flexible approaches to better adapt to a specific context, such as new marketing channels, new trends, or changes in their target audience. This approach suggests that visual consistency depends not only on the exact repetition of colours but on a visual coherence that maintains the brand's identity, even with changes in its visual appearance, so that dynamic brands, through multi-colour flexible palettes, can better adapt to changes, without losing their identity, which reinforce the idea that dynamic logos with colour changes, can potentially increase the perception of brand authenticity and adaptation to different environments. In addition, Lelis *et al.* (2022) found that typography is used more consistently than shape or colour in dynamic brands, according to the findings of existing literature, like Jochum (2013), who states that typographies dynamically used in logos are highly uncommon, something that can be explained by the crucial role of typography in brand memorability and identification, as its readability allows one to interpret the corporate name visually. Regarding changes in logo shape, according to Martins *et al.* (2019), most dynamic logos that change shape also change colour, further arguing that most shape changes are evident in the icons rather than in the wordmarks, which agrees with Lelis *et al.* (2022) that typography is the brand element that changes the least.

Therefore, how can brands create consistency between physical and virtual worlds? And, in today's world, what does brand visual consistency really mean?

As the market is constantly evolving following technological advances and the fast-changing nature of its scenario, visual identities must evolve and adapt in order to show that the brand is up-to-date and remains relevant in the new market (Melewar, Bassett and Simes, 2006). Therefore, in this new dynamic world, with physical, digital and virtual dimensions, and a wide range of media targeting a diversity of audiences, consistency emerges as a key. As adaptation implies flexibility, the rigid interpretation of visual consistency and authenticity should be left in the past, as building dynamic brands might become essential to maintaining brand consistency in this ever-evolving world, where it will become increasingly common to move freely across physical, 2D digital, and 3D virtual environments.

Overall, regarding the consistency/inconsistency debate, Gregersen and Johansen (2022) argues that while some interpretations allow for some levels of inconsistency under specific situations, they specify that there are scarce or no formal findings from research studies regarding this paradigmatic discussion. Therefore, empirical studies of consistency in visual identities could fill a gap in the literature and could be essential to redefine the concept of brand visual consistency considering the current and future scenarios. Likewise, Kim and Lim (2019) identified another gap in the study of consumer perception of logo variation

conducted in various environments. To fill these gaps, empirically assess the consistency/inconsistency debate, it would be valuable to find empirical evidence on the role of dynamic logos in the perception of brand visual consistency in the new and innovative metaverse environment, starting by assess whether consumers perceive dynamic logos as less consistent than static ones, according to the traditional paradigm, or instead dynamic logos having some levels of inconsistencies still can be perceived as consistent in the alternative paradigm concluded by the literature exposed. To assess this, it could be reasonable to hyphotesise based on the common assumption. Thus, this is hypothesised as:

**H1.a:** *In the metaverse, a brand with a dynamic logo is perceived as less visually consistent than a brand with a static logo.*

*And,*

**H1.b:** *In the metaverse, a brand with a dynamic logo is perceived as visually consistent.*

Furthermore, to the best of my knowledge, there is no empirical studies in the metaverse evidencing the relationship between brand visual consistency and brand authenticity; thus, it is relevant to understand if brand visual consistency plays a role in the perception of brand authenticity, reason why two more hypothesis have been proposed:

**H1.c:** *Brand visual consistency positively influences the perception of brand authenticity in the metaverse.*

*And,*

**H1.d:** *Brand visual consistency mediates the effect of the logo type (dynamic vs static) on brand authenticity.*

## 2.5 BRAND AUTHENTICITY IN THE NEW ERA

Broadening the debate on consistency, Gregersen and Johansen (2022) found that visual consistency and authenticity are the concepts that generate the most attention in visual identity literature. However, in existing studies, different views have emerged. Regarding brand authenticity, one of the most mentioned in the literature is that companies should reflect their identity steadily over time, whilst the other suggests that companies change over time and should, therefore, show adaptability to be perceived as authentic.

Therefore, the authenticity debate encompasses two viewpoints: a widely accepted arguing that visual identity authentically reflects the true nature of the organisation, while a few others suggest an aspirational facet can also be associated with authenticity, representing

what the organisation wants to be rather than what it really is (Gregersen and Johansen, 2022). This debate is interesting, understanding that for brands it is important to express their true self; however, on the other hand, it is key for new generations to perceive brands as innovative and showing a willingness to adapt to current and future scenarios. Therefore, maybe being real and aspirational could be a good mix rather than being interpreted as a contradiction.

The relevance of brand authenticity lies in the fact that it is an important determinant of a brand's success, proved by Schallehn, Burmann and Riley (2014) study, and also supported by other several sources (e.g., Bruhn *et al.*, 2012; Morhart *et al.*, 2015; Hernandez-Fernandez and Lewis, 2019). Forbes Business Council (2023) showed 90% of consumers agree that brand authenticity plays a key role in brand choice. Therefore, the attention it elicits is expected to continue to grow over time, as the younger generation of consumers today are placing high value on brand authenticity (NielsenIQ, 2024). In line with this, the value of brand authenticity has also increased spanning different generations (Campagna, Donthu and Yoo, 2023), and the State of Brand 2023 survey shows that 74.5% of branding professionals believe that authenticity is key for branding in the next years, followed by personalisation (58.8%) (Wheeler and Meyerson, 2024).

According to the literature, there is not one universal definition of brand authenticity (Södergren, 2021; Bruhn *et al.*, 2012; Campagna, Donthu and Yoo, 2023), as brand authenticity is a constantly changing notion (Södergren, 2021). However, diving into some definitions, Morhart *et al.* (2015) suggest that brand authenticity refers to the level of consumers' perception of a brand as being true to itself, honest, and committed to its consumers while encouraging them to genuinely be themselves. The last idea is linked with their findings noticing that consumers who are faithful to themselves are likely to choose authentic brands as they value brands that align with their identity and personal values. Expanding on this idea, Beverland and Cankurtaran (2024) suggest that today's consumers tend to choose brands for self-expression, based on the questioning of who I am, who I want to be, and who I must be, in other words, considering the real perceptions of their identity, their aspirational side and also, they adaptation in response to external expectations, which can be linked with the fundamentals outlined by Gregersen and Johansen (2022), but from a consumer perspective.

In the same vein, Moulard, Raggio and Folse (2021) broaden the definition of brand authenticity to the extent consumers perceive a brand to be true to itself, conforming to a model, following an aspirational type grounded in consumers' perceptions of whether the

brand attributes fit the social ideals they have constructed (which may vary), also in relation to the level of correspondence between the brand claims and what it does, and the brands acting according to their internal motivations or desires rather than from external sources. Likewise, and following the premise that consumers who feel aligned with the brand perceive it as authentic; Fritz, Schoenmueller and Bruhn (2017) suggest that consumers positively evaluate brand authenticity when they perceive a brand to fit their self-identity or culturally accepted norms in a given context, which is in line with the aspirational authenticity type proposed by Moulard, Raggio and Folse (2021). To summarise, different authors agree that self-identification with the brand and identifying themselves according to collective brand identification or social standards are key to perceiving brand authenticity. To further develop the idea, it is imperative to cite the Social Identity Theory (Tajfel, 2010), suggesting that individual self-identification is related to being part of a group or community with associated characteristics that foster collective identification with reciprocal influence. That said, this theory also emphasises that individuals internalise collective aspects as part of their own identity, while simultaneously excluding themselves from other types of groups. From this premise, according to Lam *et al.* (2010, p. 130), individuals identify themselves with brands aligned with their self-identification and influenced by collective brand identification. Therefore, they “perceive, feel, and value” themselves as part of a brand community with people who self-identify with a brand they have in common.

Campagna, Donthu and Yoo (2023) after analysing over a hundred papers and conducting a qualitative and quantitative study, suggest that the definitions and dimensions are incomplete, narrow, and outdated, consequently redefining brand authenticity with a broad perspective and in a contemporary context and determining the key aspect of authenticity for brands is essential, particularly as changing factors influence consumer perceptions, such as the rapid rise of the digital age. Thus, they suggest that a brand is authentic when it is distinctive and presents itself to its customers with approachability and sincerity, enduring through eras and shifting market tendencies. However, the quantitative study conducted by Schallehn, Burmann and Riley (2014) argue that although distinctiveness is considered valued, after their empirical findings, surprisingly, it received a low rating in contrast to those who defined it as a key factor for perceiving brand authenticity. In addition, this experiment highlights the importance of the brand expressing and acting consistently at all points of contact with consumers over time, thereby adapting while evolving in a way that maintains its inherent qualities, in order to be perceived as authentic.

Morhart *et al.* (2015, p. 1) propose four dimensions framework based on “continuity, credibility, integrity, and symbolism”. Each of these could be analysed from three different



viewpoints found in the literature to define brand authenticity which they called “objectivist, constructivist and existentialist”. An “objectivist” assumes that authenticity does not depend on the subjective perception of individuals but is seen as an objective and measurable characteristic of an object or entity, therefore differentiating the original from the fake. Authenticity, from the constructivist perspective, is not a fixed or universal quality, but a subjective concept that is constructed according to the individual or collective interpretation of what a specific reality should be. Similarly, Beverland and Cankurtaran (2024) suggest that authenticity is no longer understood as a fixed or intrinsic quality, but is determined by the collectively shared beliefs, perceptions, and agreements of a group or society, even if it is not intrinsically authentic according to objective criteria. Therefore, they are also aligned with the aspirational authenticity type suggested by Moulard, Raggio and Folse (2021), and with the idea of “fit” proposed later in this research. The existentialist approach instead, emphasizes the individual's internal sense of authenticity rather than the alignment or “fit” with external elements, such as social norms or cultural context.

Bruhn *et al.* (2012, p. 1) proposed a measurement scale providing four dimensions and fifteen items to assess the solidity with which audiences perceive the authenticity of a brand, named: “continuity, originality, reliability, and naturalness”; the continuity dimension is related to being stable over time and consistent in every touchpoint; originality is about being unique, distinctive, and innovative; reliability refers to making and keeping promises, which must also be honest; and naturalness refers to looking non-artificial, true to itself and genuine. This measurement scale matches the Morhart *et al.* (2015) framework in two dimensions: continuity and reliability (named credibility) as illustrated in table 1. Furthermore, the dimensions proposed by Bruhn *et al.* (2012) match the concepts suggested by Campagna, Donthu and Yoo (2023) in their authenticity definition, as illustrated in table 2. Therefore, in the Bruhn *et al.* (2012) measurement scale, it is possible to find concordance with other studies due to their close similarities, which would shed light on the relevance of the dimensions proposed in their research.

Table 1: Brand authenticity measurement scale dimensions Bruhn *et al.* (2012) compared to Morhart *et al.* (2015).

| MEASUREMENT SCALE DIMENSIONS |                              |
|------------------------------|------------------------------|
| Bruhn <i>et al.</i> (2012)   | Morhart <i>et al.</i> (2015) |
| <b>Continuity</b>            | <b>Continuity</b>            |
| <b>Reliability</b>           | <b>Credibility</b>           |
| Originality                  | Symbolism                    |
| Naturalness                  | Integrity                    |

Table 2: Brand authenticity measurement scale dimensions Bruhn *et al.* (2012) compared to Campagna, Donthu and Yoo (2023) definition.

| MEASUREMENT SCALE DIMENSION | DEFINITION                      |
|-----------------------------|---------------------------------|
| Bruhn <i>et al.</i> (2012)  | Campagna, Donthu and Yoo (2023) |
| <b>Continuity</b>           | <b>Continuity</b>               |
| <b>Reliability</b>          | <b>Honesty and openness</b>     |
| <b>Originality</b>          | <b>Uniqueness</b>               |
| <b>Naturalness</b>          | <b>Genuineness</b>              |

Moreover, as a complement, Bruhn *et al.* (2012, p. 1) stated that nowadays “authenticity is an essential human aspiration” due to the volatile and unpredictable nature of modern times which leads individuals to choose authenticity in every aspect of their lives, like experiences, social relations, and shopping; therefore, authenticity is becoming important in consumers brand choice. Regarding the last argument, Neumeier (2003) suggests that modern consumer society is oversaturated with products and brands. As a result, people are choosing from an overwhelming crowd. Therefore, it becomes essential to understand how they make a choice, which, according to him, people base their choices on brand trust. Thus, if brand authenticity is critical to building trust (Eggers *et al.*, 2013), and following the Bruhn *et al.* (2012) premises on the importance people give to authenticity when they choose, and the idea that brand authenticity should consider consumers living in the current scenario (Campagna, Donthu and Yoo, 2023), it is possible to argue that brand authenticity implies for brands the need to show to their audience the willingness to be authentic in today world, in constant evolution, keeping their true selves and core values up to date. To sum up, to be authentic a brand does not need to be unchanged over time; on the contrary, the brand must be able to present its adaptable self to fit in today's world and new generations.

Therefore, from the literature, it is possible to hypothesise that brands entering the metaverse should fit with the metaverse's identity and characteristics that differentiate it from physical or 2D digital environments, along with the cultural norms constructed by its users. “Fit in” to social standards is described as essential for the brand; for example, a brand that wants to fit in the luxury industry must adhere to certain industry conventions in accordance with the expectations of its audience (Beverland and Cankurtaran, 2024, p. 54). Thus, CVI must be adaptable to reflect its dynamism, pointing out that since organisations are ever-changing, their visual identity must also evolve at the same pace to maintain its authenticity (Gregersen and Johansen, 2022).

From the visual perspective, a study conducted by Wang *et al.* (2023) tested in a lab experiment the visual factor in brand authenticity perception, to prove their “simple = authentic” lay theory. Lay theories are not based on formal education but reflect widely accepted ideas that people use to interpret the world around them, allowing people to make inferences about the brand; for instance, when people interpret visual simplicity with a genuine, unpretentious, and unadorned image, they relate to in their mind as more authentic, as it does not attempt to present itself in a false way. Their finding suggests that visually simple is perceived as more authentic. They use packaging as a visual identity element, therefore the question remains whether this can be generalised to other visual elements of the brand, such as the logo, as in most of the literature is state that one of the main principles of a logo is to be simple. In other words, when a brand's visual design is simple and unadorned, consumers may infer that it is more authentic, as it suggests the brand is not trying to hide anything or present itself in a false way. Coinciding with the concept of simplicity, Haviv (2018, 7:32) suggests that a good logo should be simple, adding two other essential aspects, which are the distinctiveness or uniqueness, and the logo being “appropriate” in relation to the logo fitting with the brand personality traits. Therefore, the construct of appropriateness resonates with the idea of “fit in” proposed in this study. Accordingly, the concept of “fit in” underpins the hypothesis:

If a brand with a dynamic logo “fit in” the metaverse, then *a brand with a dynamic logo is perceived as authentic in the metaverse.*

**H2.** *A brand with a dynamic logo in the metaverse is perceived as more authentic than a brand with a static logo.*

Before closing these lines on brand authenticity, it is relevant to underline that new brands can be perceived as authentic in a short period of time, as according to Guèvremont (2018) study, the perception of brand authenticity is independent of the time factor, thus new brands can be perceived as authentic regardless of their lifespan.

## 2.6 THE MEDIATING ROLE OF BRAND PERSONALITY ON BRAND AUTHENTICITY IN THE METAVERSE

Logos must clearly communicate the brand's personality to build strong bonds with their audience (Jun and Lee, 2020) as logos are able to impact perceived brand personality (Bajaj and Bond, 2018). However, to what extent is a brand personality perceived in a logo?

According to Aaker (1997), logos can indirectly convey brand personality traits that consumers perceive to be associated with the brand.

The literature sheds light on the fact that brand personality is perceived in a logo in multiple ways, such as in its colour (Labrecque and Milne, 2012; Grohmann, Giese and Parkman, 2013), typography (Grohmann, Giese and Parkman, 2013), size (Cai and Mo, 2020), animation (Jun and Lee, 2020), and symmetry (Bajaj and Bond, 2018). Grohmann, Giese and Parkman (2013) suggest that consumers perceive colours and typefaces with certain emotions and associated meanings independently. However, they argue that the typeface has more influence than the colour. Likewise, based on the premise that the logo carries semantic meaning, Cai and Mo (2020) conducted an experiment to further understand the relationship between logo size and perceptions of brand personality, specifically linking large logos to exciting brands. The findings show that a large-size logo and the brand personality labeled excitement have in common that they both are visually striking. Furthermore, large logos fit with an exciting brand because together they are readily understood and interpreted, leading to a positive perception of the brand which can be explained due to the perceived congruence. On the other hand, a logo with smaller dimensions in relation to an exciting brand could be perceived with less congruence, which may result in a less positive perception of the brand. The exciting brand trait was also perceived in asymmetrically shaped logos, according to the study conducted by Bajaj and Bond (2018). Likewise, Jun and Lee (2020) suggest that an exciting personality is conveyed to a greater extent in animated logos and revealed in their study that consumers tend to choose logos with motion rather than static logos. This was assessed by considering the perceived brand personality of each logo. In line with previous research, they also found that animated logos are perceived as more aesthetically striking when they express an honest, elegant, or exciting personality trait.

To gain a deeper understanding of how brand personality is perceived in logos, it is important to move beyond examining each logo element individually. Instead, focus should be placed on how these elements work together as a cohesive whole, particularly in relation to the static or dynamic nature of the logo. Therefore, the transformation factor in dynamic logos, adapting or evolving, should be considered for its potential role in shaping brand personality perception. Additionally, it would be valuable to study whether the transformation of the logo, which represents flexibility and innovation, could be associated with the excitement personality trait described by Aaker (1997, p. 351) as “daring, spirited, imaginative, up to date”, and introduced as one of the five dimensions called “Sincerity,

Excitement, Competence, Sophistication, and Ruggedness” proposed in her brand personality framework and measurement scale.

Thus, this research is based on the assumption that logos convey meanings and emotions that lead to the perception of brand personality traits. The existing literature supports this, as several studies focus on the logo and its elements. However, to the best of my knowledge, there is no existing literature specifically on the relationship between the excitement dimension of brand personality and dynamic logos. Aiming to fill this gap and after analyse the previous literature, it is possible to hypothesise:

**H3.a.** *A brand with a dynamic logo vs static is perceived as a brand with an exciting personality.*

Furthermore, it would be valuable to understand the role of brand personality in the specific context of virtual immersive spaces. The metaverse, as a novel and highly innovative marketing channel, invites brand managers and related specialists to be visionaries (Koochang *et al.*, 2023), to stand out from their competitors through an avant-garde way of reaching their audience (Lim *et al.*, 2025). However, in this exploration phase, some expectations may or may not be fulfilled in the audience's mind. Therefore, understanding the relationship between brand personality and authenticity in the metaverse is relevant for brands seeking to enter the metaverse. Thus, the question remains whether brand authenticity can be influenced by the personality associated with the brand in the context of the metaverse.

People recognize personality traits in others and also in brands (Azoulay and Kapferer, 2003), helping people to be identified from others due to their particular personalities, which make them distinct from the rest (Ünal, Dalgic and Akar, 2018), and brands among others brands with a similar offer in the same market (Aaker, 1997). Therefore, it is relevant to notice that the human personality and the brand personality are both related in a way that individual personality traits are attributed to brands leading to a brand being perceived, as an example, with a youthful, sophisticated, or sincere personality trait, according to Aaker (1997, p. 347) definition of brand personality, expressed as "the set of human characteristics associated with a brand". Thus, brands can motivate immediate mental reactions such as calmness, joy, excitement, or nostalgia, for instance, and create sentiments as long-term responses expressed by their personality traits (Keller, 1993). To expand the research on brand personality, Aaker (1999), after conducting two experiments, found that people identify better with brands that match their own personality traits. Likewise, Huang, Mitchell and

Rosenaum-Elliott (2012) study shows that individuals tend to choose brands that they perceive as close to their self-identity, and, in the same vein, Yao, Chen and Xu (2015) provide evidence that when consumers feel reflected in a brand, that is when their personality traits aligned with those of a particular brand, then, they establish emotional connections with those brands. Thus, for example, a person who perceives themselves as sophisticated may feel an emotional attachment to a brand such as Chanel, or someone who considers themselves adventurous may feel connected to the Patagonia brand. However, Aaker (1999) suggests that people's personality traits are relative because they can change or slightly vary under different situations and external influences, driven by their need for self-expression and self-identity; consequently, consumers' personality can fit brand personalities depending on the specific context, which is relevant for this research exploring brand personality perceptions in the metaverse, as it is a particular environment with specific characteristics where consumers can self-express and connect with brands in a new way. Consequently, brand personality is considered a crucial factor in customer preference (Aaker, 1999; Coelho, Bairrada and de Matos Coelho, 2020), driven by their need for self-expression and self-identity; consequently, it is possible to conclude from Aaker (1999) study that brands that allow consumers self-expressions are positively perceived.

Extending what was previously mentioned, consumers in the metaverse can maximise their self-expression, as they can create an avatar, as a digital representations imbued with individual traits generated using computer technology (Holzwarth, Janiszewski and Neumann, 2006), to identify themselves according to their preferences, deciding not only their clothing, hair or skin colour, but also their gender and shapes, as they can be instead of a human-like avatar, an animal, an object or the most fantastic expression of themselves (e.g., having wings or a special glow). In the experiment conducted by Dalgic, Akar and Unal (2018) it was found that people represent in their avatars their ideal image of themselves, different from their real selves. However, despite people playing a role with their avatar in the metaverse, according to Huang, Mitchell and Rosenaum-Elliott (2012), their core personality traits stay relatively stable even in different settings and adopting identities. This may explain the important role avatars play in allowing people to express themselves, which can lead to a positive perception of brands in the metaverse.

Furthermore, to achieve positive brand perceptions and greater memorability in the metaverse, according to Gabisch and Gwebu (2011), the brand image must be consistent with the consumer's self-identity. However, the brand must maintain cross-channel consistency, IRL and in the metaverse, as the study concluded that if the brand image in the virtual world does not resonate with consumers' self-image, that could be perceived as a

lack of congruency between the two worlds and can negatively impact the brand image in the real world. Therefore, a question arises: what type of brand personality trait can align with consumers' personalities in the metaverse?

The importance of sincere and exciting brand personalities in the marketing field has been underlined by Elletcher *et al.* (1999, cited in Aaker, Fournier and Brasel, 2004) as they embody ideal values to nurture brand-consumer relationships, making them important in the marketing field. In the same study, Aaker, Fournier and Brasel (2004) suggest that the personality trait of sincerity is being used by companies seeking to project a close, warm, and trustworthy image. In this type of personality, relationships are expected to deepen over time. By contrast, the excitement brand personality is associated with more transient relationships, being perceived as vigorous, active, appealing, and bold. In the same study, they conducted an experiment that empirically proved that when sincere brands are subjected to setbacks that challenge their projected image, their perception of sincerity is severely affected, and they can hardly recover. Conversely, exciting brands are not only unaffected but, on the contrary, experience a positive effect on the relationship, which is revitalized, following the expected consumer's idea of the adventurous nature of this type of brand, allowing them to interpret unusual actions as positive.

Likewise, Sundar and Noseworthy (2016) study provide evidence that when a brand with an exciting personality does something unexpected (whether positive or negative), consumers may still perceive it as authentic, as unexpected behaviour aligns with the nature of an exciting personality. In contrast, when consumers perceive a brand as sincere, an unexpected action or outcome may cause confusion or disappointment, as this could be perceived as a contradiction to the personality sincerity projected by the brand, leading to a reduced perception of authenticity. Thus, if brands with dynamic logos entering the metaverse are considered innovative, creative, bold and flexible, it may be natural for them to be perceived with an exciting brand personality, even if they are not being identified with this personality trait IRL. Therefore, if brands in the metaverse are considered to behave unexpectedly due to the differences between brand experiences in the metaverse and in the real world, a dynamic logo and the metaverse can help by both enhancing the perception of an exciting personality, reducing the risk of consumers' negative perceptions due to their unexpected behaviour. This way, even if the brand in the physical world is perceived as having a sincere personality, the metaverse and dynamic logo can project an exciting brand personality that would trigger a positive consumer perception of the brand in the metaverse.

To conclude, we could infer that brands can explore the metaverse without risking the loss of authenticity, even if they, for instance, have a sincere personality in the real world, as the mere presence in the metaverse can provide them with an exciting personality, which may be perceived as authentic. Thus, this study suggests that brand personality can enhance brand authenticity in the metaverse when the brand personality fits with the immersive environment of the metaverse.

Thus, an apparent fit emerged from the literature suggesting that the excitement personality trait can allow brands to fit in the metaverse. In addition, this study aims to prove that when a brand fits in the metaverse, users can perceive the brand as more genuine and authentic.

**H3.b.** *Brand excitement positively influences the perception of brand authenticity in the metaverse.*

In addition, Kaur and Kaur (2019) found a positive relationship between logos and brand image, mediated by brand personality, revealing this indirect effect as larger than the direct effect between the same constructs. They demonstrated that logos influence the excitement dimension of brand personality, and this in turn influences brand image.

Therefore, after analysing the existent literature, and combining H3a and H3b hypotheses, it is possible to infer that:

**H3.c.** *Brand excitement mediates the effect of the logo type (dynamic vs static) on brand authenticity.*

## 2.7 THE MODERATING ROLE OF "FLOW"

The concept of flow was first introduced and then further developed by the psychologist Mihály Csíkszentmihályi (Novak, Hoffman and Yung, 2000). Csíkszentmihályi (1975) and Csíkszentmihályi and Larson (2014) defines the sense of flow as a state of deep enjoyment that individuals reach when they feel they are fully engaged, capturing all their attention, adding that people may experience flow under specific circumstances when they are undertaking some daily activity such as painting, dancing, playing basketball, videogames and many more, mainly creative or playful experiences. Explaining that the reason why it is more common to experience flow in leisure activities is because people in this state are not thinking about obtaining any benefit or retribution other than internal, i.e., personal satisfaction. However, he states that it does not occur frequently, and when it is perceived



can be difficult to sustain for long periods, because despite a person experiencing flow is unaffected by ennui or any concern, and is mentally in control of their actions, using their skills to overcome some level of challenge enough to keep them focused solely on the activity, if they divide their focus being attentive to something else, like the external surroundings or arising thoughts, the sense of flow disappears. The Flow Theory, introduced by Csíkszentmihályi (1975), also emphasizes the perception of time, as it is reported, people feel as the time flies while they are in flow. Likewise, Novak, Hoffman and Yung (2000) suggest that being in flow means to be in total involvement with the activity or experience, excluding all else, thereby being fully concentrated while performing the activity in question, resulting in a pleasurable feeling. Therefore, flow is a state of mind that is pleasant and fun (Csíkszentmihályi, 1975; Hoffman and Novak, 1996; Csíkszentmihályi and Larson, 2014). To summarise, the Flow Theory indicates that people feel flow when they perceive levels of skills closely align with the challenges, experiencing a state where a person is so immersed that they act with complete involvement, which is traduced in a feeling of joy and pleasure.

Regarding flow in virtual environments, Novak, Hoffman and Yung (2000) suggest that people experience flow in online environments facilitated by interactive technology depending on the degree of skill or control experienced by its users. Hence, when users define it as sufficient, it can lead them to feel excited; on the contrary, if users perceive the experience as too challenging, they may feel frustrated. That can be explained by Mehrabian-Russell's (1974) PAD theory, which suggests that when users perceive a low degree of control over an experience, this leads to a negative emotional response such as frustration, which can impact their attitudes (Kulviwat *et al.*, 2016) toward the brand. For example, this can happen in a virtual brand experience context.

The concept of flow has been tested in virtual reality brand experiences in different contexts (e.g., virtual shopping experiences, advergames, virtual branded spaces). For instance, Wongkitrungrueng and Suprawan (2024) in their empirical study found that people explore a brand experience in the metaverse for longer when they are enjoying it, which is aligned with the sense of flow. In addition, the experiment by Pizzi, Vannucci and Aiello (2020) found that people in a virtual immersive shopping space experience a significantly greater sense “of being there” compared to those IRL, which was traduced in a better experience, making people more likely to shop there again. Likewise, Hooker *et al.* (2019) concluded that achieving a flow state in customers has a positive effect on their brand attitude and consumers' behaviour toward the brand, and companies should strive to achieve this by creating entertaining experiences that make customers lose their sense of reality. Likewise, Nah, Eschenbrenner and DeWester (2011) unveiled positive effects on consumers' brand

perception, especially in terms of flow on brand equity, which positively influences consumers' responses. In addition, they suggested that despite virtual reality can enhance brand value using flow theory, both positive and negative effects have been found when compared to 2D environments. This is because, while flow can enhance brand equity in an immersive and entertaining environment, it can also act as a distractor.

Novak, Hoffman and Yung (2000) explore the concept of flow in an online environment, proposing a measurement scale that has been widely used across the literature. This scale presents a set of items called "Web usage, arousal, challenge, control, exploratory behaviours, flow, focused attention, interactivity, involvement, playfulness, positive affects, skill, telepresence and time distortion" (Novak, Hoffman and Yung, 2000, pp. 28-29). This measurement scale has been adapted to the virtual environment to be used in this study, selecting eight of the fourteen variables they proposed, as being the most related and useful to prove the following hypothesis:

**H4.a. *Flow positively influences the perception of brand authenticity.***

The metaverse has also been called "immersive virtual world" because immersion is a factor that differentiates a simple digital or online space from a virtual one, which can be experienced through VR technology that allows users to immerse themselves in a three-dimensional space using an avatar as their digital self. Bartle (2007) defines immersion as a state in which the real and virtual identities of individuals merge, transforming their avatars from just a digital character image into their real self, and over time, virtual and physical identities become the same, highlighting that the immersiveness experienced in the metaverse allows users to feel the sense of flow. Therefore, the metaverse brings to brands a novel and exciting opportunity to interact with consumers (Lim *et al.*, 2025), using avatars as a representation of themselves, and experiencing the immersiveness in a 3D virtual environment, through the flow or sense of "being there", allowing them to perceive certain brand personalities over others, such as excitement. This is in line with De Gauquier *et al.* (2019) study suggesting that brands in VR can enhance their consumers' perception of excitement brand personality trait, based on their finding that 3D brand ads in VR are perceived with an evident excited personality compared to 2D ads. Therefore, brand personality and flow are related according to Wang *et al.* (2015) studio on advergaming in virtual spaces. They found that individuals positively evaluated brand personality if they experienced intermediate and elevated levels of flow, in contrast to those who experienced poor levels of flow, who perceived brand personality negatively. It is therefore important to

understand to what extent the level of flow experienced in the metaverse can influence the perception of brand excitement.

**H4.b.** *Flow influences the perception of brand excitement.*

Overall, the role of the sense of flow in the metaverse entails significant potential for brands to influence customers' perceptions and attitudes toward the brand. However, while some studies explore the role of flow in virtual immersive brand experiences, they all acknowledge limitations and gaps for future research. For instance, Dwivedi *et al.* (2023) suggest they should concentrate on uncovering the ways and reasons that flow shapes users' perceptions in the metaverse. Therefore, this study investigates the moderating role of flow on consumers' brand perception in the metaverse by testing the type of logo. Therefore, the following hypothesis is proposed:

**H4.c.** *Flow moderates the effect of the logo (dynamic vs static) on consumers' perception of brand authenticity.*

To conclude, the literature review sheds light on the importance of research on consumers' brand perception in the metaverse, as a novel and disruptive environment where consumers meet and engage with brands in an interactive and immersive way, using an avatar as their virtual self, allowing them to self-express. However, the relationship between brands and consumers in immersive virtual spaces is not straightforward, due to the complexity of its technology-driven nature and its specific characteristics. Therefore, the literature review presents in seven sections the main themes, regarding: the metaverse and its relevancy for brands; the logo as the main element of visual identity and a valuable brand asset, its identifying role and evolution; to then continue with the evolution of logos from static to dynamic design and emphasising the importance of flexibility and adaptation for the current and future market scenario, including the implications in consumers perception in the metaverse. Continuing with sections 2.4, 2.5 and 2.6 exploring consumer perceptions on: brand consistency, examining consistency-inconsistency debate, which leads to hypothesise based on the common assumption that within the metaverse a brand with a dynamic logo is perceived as less consistent than one with a static logo; brand authenticity, analysing the different point of view that led to the proposed idea of fit in the metaverse, hypothesising that brand with a dynamic logo in the metaverse is perceived as more authentic than a brand with a static logo; and brand personality, specifically regarding excitement personality trait in the metaverse, to better understand how it align with the excitement nature of the metaverse and dynamic logos and the dynamic identity of individuals (Aaker, 1999), formulating three

hypotheses to prove whether a brand with a dynamic logo vs static logo is perceived as a brand with an exciting personality, if brand excitement positively influences the perception of brand authenticity in the metaverse, and if it mediates the effect of the logo type (dynamic vs static) on brand authenticity; to finally close with the sense of flow, as a “dynamic state” (Csíkszentmihályi, 1975, p. 36) that people experience when they are fully immersed in the metaverse, therefore, following three hypotheses this study aims to test if flow positively influences the perception of brand authenticity and brand excitement, and if flow moderates the effect of the logo (dynamic vs static) on consumers’ perception of brand authenticity. Therefore, dynamism emerged in the literature review as a key concept related to people, brands, and the immersive virtual environment.

Furthermore, to summarise the knowledge gap identified in previous studies, the review of the existing literature reveals a lack of studies on branding in the metaverse in the current scenario (Barrera and Shah, 2023), and specifically regarding the role of static vs dynamic logos on consumer perceptions in this immersive virtual environment, as research on logo variation in different scenarios emerges as a knowledge gap in Kim and Lim (2019) study; and on the role of visual consistency-inconsistency of dynamic logos in the metaverse, as according to Gregersen and Johansen (2022) there are scarce or no empirical studies on this paradigmatic debate. Likewise, to the best of my knowledge, the relationship between dynamic logos, the metaverse, and brand excitement has not been studied, nor has the relationship between dynamic logos, the metaverse, and consumer perceptions of brand authenticity. In addition, there is a lack of research on the moderating role of the sense of flow on consumer perceptions in the metaverse, specifically through experiments, according to Dwivedi *et al.* (2023). These knowledge gaps highlight the need for current research to empirically demonstrate the influence of dynamic versus static logos on consumers’ perceptions of brand authenticity in the metaverse and the mediating role of visual consistency and personality excitement while seeking to understand the impact of the level of flow experienced by consumers on their perceptions of the brand.

### 3. METHODOLOGY

The methodology chapter begins by presenting the research philosophy and the approach and design adopted for this study, followed by the context, which includes platform selection and the space and logo design, illustrated with images. Then, the pilot test, and an explanation of the sample size, its characteristics, and the criteria used for participant selection, followed by a detailed narrative of the procedures, and then, the method for data collection and measures employed will be explained. This chapter concludes by presenting the ethical considerations of this study.

#### 3.1 RESEARCH PHILOSOPHY, APPROACH AND DESIGN

This quantitative research is aligned with the post-positivist paradigm (Kaplan, 2015), following the belief that consumers' brand perception can be studied empirically, although with some limitations; therefore, this study seeks to identify the potential effect rather than absolute truths; applying null hypothesis significance testing to statistically analyse the probable effects of dynamic vs static logos on brand authenticity perception and also to estimate the potential influence of brand visual consistency, brand excitement, and the sense of flow experienced by participants in the metaverse, as expressed in a series of hypotheses. This study follows a deductive reasoning approach, employing a theory-driven logic of inquiry and empirical data collected within the experiment to test the hypotheses proposed in the literature review.

The methodology for conducting an experiment follows Haslam *et al.* (2024) suggestions, to test how manipulating the independent variable (IV) affects the dependent variable (DV). In this study, the IV is the logo, which has been designed in a static and dynamic version (see Figure 8, p.39) and manipulated between subjects. Participants were randomly assigned to one of two conditions: being exposed to a brand with a static logo or a dynamic logo.

The research has been designed as an experimental study with a quantitative approach, aiming to empirically prove whether, within the metaverse, dynamic logos vs static logos can influence consumers' perception of brand authenticity and the mediating role of brand visual consistency and brand excitement, in addition to the potential impact of the perceived levels of flow. The variables are expressed as follows:

**Independent Variable (IV):** Type of Logo (static vs dynamic).

**Dependent Variable (DV):** Brand Authenticity.

**Mediating Variable (MedV):** Visual Brand Consistency and Brand Excitement.

**Moderating Variable (ModV):** Flow.

The study type and approach were selected considering the lack of experimental research on branding in the metaverse, in addition to the suggestions for future research found in the literature (e.g., Gabisch and Gwebu, 2011; Dwivedi *et al.*, 2023; Lee and Cho, 2023; Rosado-Pinto and Loureiro, 2024). The research approach was determined by following the literature, indicating that experimental design commonly uses a quantitative approach and considering the type of data collected (numerical) and its statistical analysis (Creswell and Creswell, 2018). Additionally, an experiment is the best way of establishing causality/causation (Creswell and Creswell, 2023) to show that one thing directly or indirectly causes another, therefore providing evidence of not just correlation, but of directional influence. In this way, experiments make it possible to infer that changes in the IV (deliberately manipulated) cause changes in the DV, controlling other variables that may influence the outcomes (Creswell and Creswell, 2023). Furthermore, an experimental design suits this research due to the need to create specific levels of the IV, under unique conditions required for testing. The same logo in static and dynamic versions displayed in an existing immersive branded space would be difficult to find for testing. Therefore, another type of research (e.g., a case study) was not the most suitable for this study. Furthermore, to avoid any bias, a brand was designed from scratch to be tested.

## 3.2 THE CONTEXT: DESIGN OF THE METAVERSE SPACES AND BRAND

For this experiment, metaverse spaces were designed and built from scratch, and a new brand was also designed with a static and dynamic version of the same logo.

### 3.2.1 METAVERSE PLATFORM SELECTION

The selection of the metaverse platform considered the gap found in the literature on the lack of empirical research in contemporary metaverse platforms, as stated in previous research (e.g., Barrera and Shah, 2023; Wongkitrungrueng and Suprawan, 2024). Spatial.io was the chosen platform to build the spaces primarily because of (1) its high-quality graphics, (2) its ease of use to build the spaces, (3) its user-friendly interface for first-time participants to quickly understand how to use it, (4) because it does not require a VR headset. In addition, Spatial.io is a platform chosen by major global brands to establish a metaverse presence primarily through virtual immersive brand experiences (e.g., Walmart,

Tommy Hilfiger, Hugo Boss, Jack Daniel's, among others), which adds relevance as an experiential space to assess consumer brand perceptions due to its current usage.

Furthermore, previous experimental studies in the metaverse have been conducted mainly in Second Life (e.g., Nah, Eschenbrenner and DeWester, 2011; Barnes, Mattsson and Hartley, 2015), considered the predecessor of the current metaverse, which experienced difficulties that resulted in the failure of real-life brands trying to succeed in it (Barnes, Mattsson and Hartley, 2015), and being today no longer relevant for branding purposes, according to contemporary literature and industry reports which present other metaverses as the most important nowadays, such as Roblox, Fortnite, The Sandbox, Zepeto, Spatial and Minecraft (GEEIQ, 2025). Therefore, as suggested in the introduction, there are limited studies on contemporary virtual immersive spaces. However, despite its current relevance for brands, limited experimental studies have been conducted on Spatial.io. For instance, Arya *et al.* (2024) conducted an experiment in this metaverse platform to test the effect of brand authenticity on brand love and engagement through a gamified brand metaverse experience. This experiment was experienced by participants using smartphones instead of computers. Other experimental studies on Spatial.io are related to different fields of study, such as tourism (e.g., Martí-Testón *et al.*, 2023) and museology (Alabau *et al.*, 2024).

### 3.2.2 THE DESIGN

**The space:** Metaverse spaces were designed from scratch as an open space enclosed by concrete walls, without a roof, to take advantage of the sunlight provided by the skybox used as a scenario (see Figure 6). The architecture was built as a 3D model using Vectary. Both spaces (static and dynamic) used the same architecture, with only one difference regarding the logo in 3D used as a part of the architecture in the dynamic logo space, while in the static space, it was replaced by a wall with a 2D logo (see Figure 7). The pieces of furniture and other decoration elements were 3D models provided by Spatial.io and the Sketchfab catalog integrated into it. A chair was created specifically using the software Blender to create a hotspot for the avatar to be sit on.

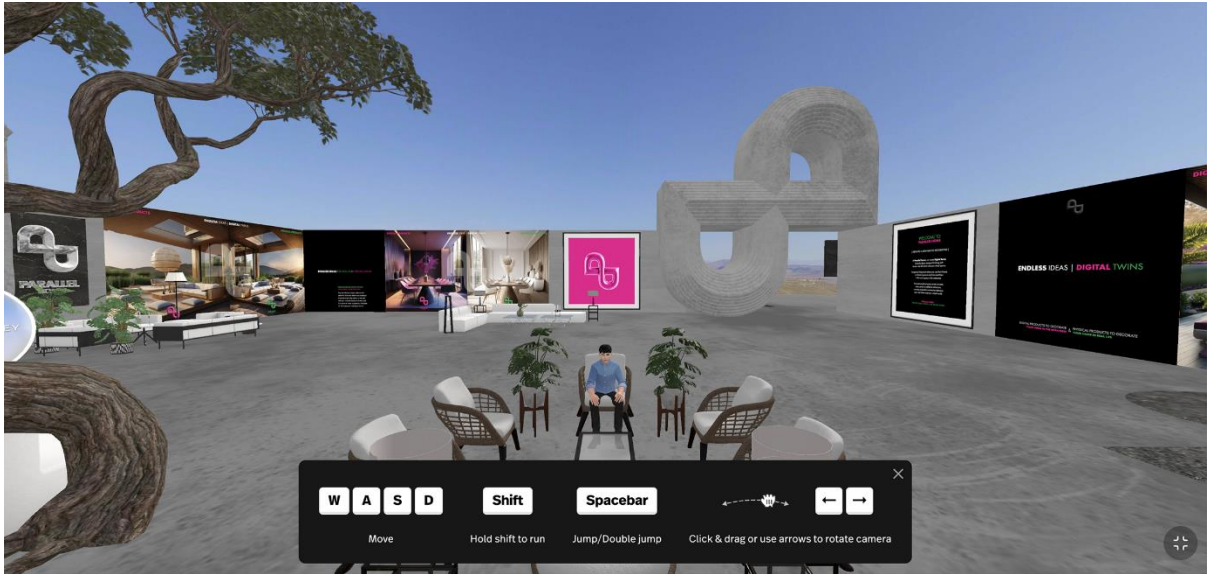


Figure 6: Open space design, with concrete walls.



Figure 7: Entrance. Static space using a 2D logo, and the dynamic spaces using the logo in 3D as part of the architecture.

**The logo:** The brand was non-existent, and it was created for this study to avoid any bias related to prior knowledge of the brand. The brand designed for the purpose of this study includes the naming and visual identity. The brand was designed to represent a fictitious decoration company offering digital twin of physical and digital (phygital) furniture and home accessories, and it was named PARALLEL HOME to represent the parallelism (parallel lives) between the physical and virtual realm, to decorate homes in consumers' physical and virtual lives. The logos versions were designed from scratch using Adobe Illustrator and Photoshop (see Figure 8). The logo is composed by an icon that represents the infinite possibilities offered by digital twins, while suggesting the existence of two parallel worlds using the letter P; and the wordmark, which uses the typeface Futura PT in two weights: heavy and book. The logo in the static version, followed a traditional and rigid VI design, and the dynamic versions of the same logo, a dynamic, flexible, and adaptable VIS, both maintained the typography and shape, differing only in form (adding volumetry and motion), and colour palette, which was wider in the case of the dynamic version of the logo, changing



also its textures, as the category named Container in the dynamic visual identity model proposed by Van Nes (2012). As a complement and part of the visual identity, three images showing the products offered by the fictitious brand were also designed to give realism to the spaces using Adobe Illustrator, Adobe Photoshop, and Adobe Firefly, and animations were created using Adobe After Effects. However, the logo was the primary element of the space, being used on multiple occasions (see Figure 9). The brand was designed by the author of this study (Begona Medina Labayru) who is a graphic designer with over twenty years of experience in brand design.

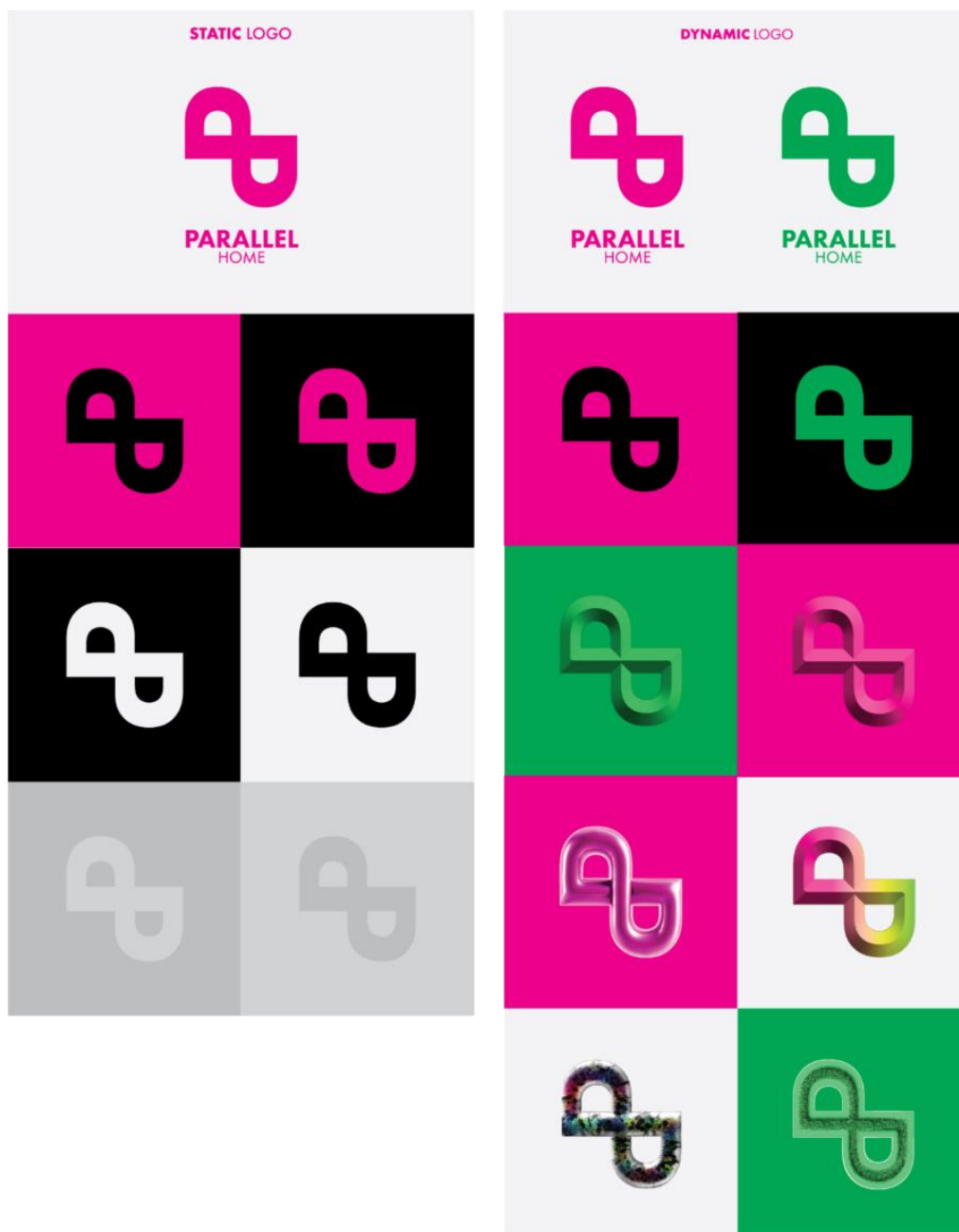


Figure 8: Static and Dynamic logo design.



Figure 9: Static (left) and dynamic (right) spaces in the metaverse.

### 3.3 PILOT TEST

A pilot test was conducted before data collection to check the experiment's technical performance, instructions' clarity, and questionnaire. A small group of four academics from York St John University piloted the experiment, two tested the static space, and the other two tested the dynamic space, providing feedback and advice, such as small adjustments to the instructions to make them more concise and clearer. None of them experienced technical issues or difficulties in navigating the space. None of them participated in the final study on Prolific.

### 3.4 PARTICIPANTS

A total of 346 participants were recruited from Prolific and then completed the questionnaire on Qualtrics. Thus, the total sample size ( $N$ ) was 346, meeting the recommended ranges according to the rule of the 10 participants per variable, with a minimum of 5, suggested by Tinsley and Tinsley (1987), who also suggested that the given rule is not essential for studies with large samples, specifying the number of over 300 participants. Therefore, this study sample size of 346 would be considered as adequate. Furthermore, the sample size of this study is similar to other experimental studies conducted in the metaverse (e.g., Balakrishnan *et al.*, 2024; Dwivedi *et al.*, 2024; Sallaku *et al.*, 2025), ranging from 354 and 378 participants.

The criteria for recruiting participants in Prolific specified that they must be people living in the UK and over the age of 18. The wide range of age reflected the fact that people of various ages show interest in using the metaverse, as Aiello *et al.* (2022) evidenced in their study results showing the 75% of millennials and 50% of baby boomers are aware and keen on the metaverse. This is in line with other studies on this topic using a broad range of ages, such as Gabisch and Gwebu (2011) with an age range of 19-71 and  $M = 38.76$ . Therefore, the sample looked similar to current and potential consumers in the metaverse.

### 3.5 PROCEDURES

The experiment was conducted online. Participants were recruited on Prolific, an online platform specialised in research to collect valid and reliable data (Peer *et al.*, 2017) to conduct online experiments, in particular, due to its transparency as participants are aware that they have been recruited for research purposes, being clearly informed about the purpose of the study and payments according to the time spent, etc. (Palan and Schitter, 2018).

The experiment was detailed in the study description as follows: its purpose of assessing a metaverse experience; the time it would take to visit the metaverse and answer the survey (around 8 minutes in total); the criteria that must be met to participate in the experiment specified as being at least 18 years old and living in the United Kingdom; and explaining that participation was voluntary, so participants could withdraw from the study before their data were collected by closing the browser tab. Participants were also informed about data management: data were to be securely stored and kept fully anonymous, used only for research purposes while asking for agreement to proceed. Basic instructions were provided regarding using Google Chrome and selecting full-screen mode, explaining that random avatars will be assigned to participants and that they cannot be changed, how to move their avatars using their computer keyboards WASD and arrow keys to move around and pressing shift to run, and enlarge images by clicking on them; and how to access the Qualtrics survey by clicking on the portal, which looks like a bubble. However, on the platform, for clarity, participants had the basic instructions (keyboard shortcuts) for using their avatar always visible (see Figure 10). Regarding the portal, the text “Go to the survey” is written on the portal (bubble), and when the avatar was close to the portal, an alternative instruction to press F to access the survey appeared (see Figure 11 and 12).

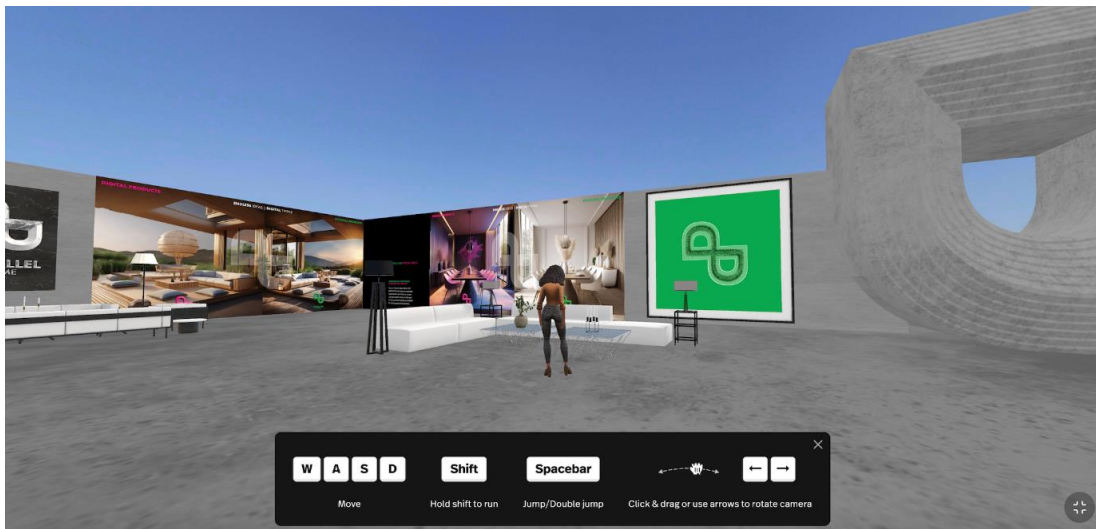


Figure 10: Keyboard shortcuts for navigation.





Figure 11: Portal displayed in the spaces.



Figure 12: Portal showing "Go to the survey" and "Use Portal (F)".

Further details of the procedures: Two identical studies were published on Prolific under the names Metaverse Study 1 and Metaverse Study 2 at the same time, both with the same description stating: "In this study, you will be asked to visit a metaverse space and then take a short survey about your perceptions and experience within that metaverse space". Participants could only take part in one of those studies. In this way, participants were randomly divided into these two groups to visit one of two identical virtual immersive spaces differing just in the version of the logo displayed (Metaverse Study 1-Static, Metaverse Study 2-Dynamic). Each study contains the link to visit the specific metaverse space, provided after agreeing with the statement "If you are happy to proceed with this study, please click the link below" at the end of the study description; therefore, participants voluntarily took part in the experiment after reading the details of the study and giving their informed consent.

After joining the study in Prolific, participants accessed the metaverse space through a link that directed them to one of the experimental conditions (study 1: static logo, or study 2: dynamic logo) where they used a provided avatar to walk around while exploring the branded space. Once they completed the experiment of visiting a virtual brand experience in

the metaverse, participants used a portal displayed in the space to access the survey in Qualtrics.

In Qualtrics, participants were asked to give their consent to continue with the survey, which would take about three minutes to complete. At the end, participants clicked the provided link to return to Prolific to finish the experiment and receive fair financial compensation in their Prolific account, which at the end of the experiment the average reward was £8.4/hr. with a median time of 6.9 minutes, exceeding the minimum pay of £6/h stated by Prolific.

### 3.6 METHOD AND MEASURES

This study used a questionnaire as a method to assess consumers' perception in the metaverse. The questionnaire was designed to measure the variables of brand visual consistency, brand excitement, brand authenticity, and flow, using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) to assess the mentioned items (see Table 3), plus two items regarding age using a slider from 18 to 100, and gender using multiple choice. All the items were deployed in five blocks: the first consisted of an introduction asking for consent to continue or otherwise go to the end and drop out of the experiment; the second consisted of 14 brand-related questions to measure the variables of consistency, exciting brand personality, and authenticity; the third included 10 questions to measure the level of flow experienced in the metaverse, including three more items to find out participants' familiarity with the metaverse, and whether their experience in the metaverse was in high resolution and without technical issues (e.g., bugs); the fourth block included two demographics questions about age (from 18 to 100 years old), and gender using multiple choice (male, female, non-binary/third gender, prefer not to say). The final block contained the link to be redirected to Prolific.

*Table 3: Measurement scales.*

| VARIABLE    | ITEM  | SCALE REFERENCE                          |
|-------------|---|--|
| Consistency | Parallel Home brand looks tidy.                           | Van Den Bosch, Elving and De Jong (2006) |
|             | Parallel Home brand looks consistent.                     |  |
|             | Parallel Home brand can be easily identified by its logo. |  |
| Excitement  | Parallel Home brand is up-to-date.                        | Aaker (1997)                             |
| Personality | Parallel Home brand is cool.                              |  |

|              |   |  |
|--------------|---|--|
|              | Parallel Home brand is imaginative.   |  |
|              | Parallel Home brand is daring.  |  |
|              | Parallel Home brand is trendy.  |  |
| Authenticity | Parallel Home brand is innovative.  | Bruhn <i>et al.</i> (2012) and Campagna, Donthu and Yoo (2023) |
|              | Parallel Home brand reflects a timeless design.   |  |
|              | Parallel Home brand has a clear concept that it pursues.  |  |
|              | Parallel Home brand is unique.  |  |
|              | Parallel Home brand looks credible.   |  |
|              | Parallel Home brand makes a genuine impression.   |  |
| Flow         | While visiting the Parallel Home brand experience, I experienced excitement.  | Novak, Hoffman and Yung (2000)                                 |
|              | While visiting the Parallel Home brand experience, I felt deeply immersed in it.  |  |
|              | While visiting the Parallel Home brand experience, I felt a sense of joy.   |  |
|              | While visiting the Parallel Home brand experience, I felt playful.  |  |
|              | While visiting the Parallel Home brand experience, my attention was focused on it.  |  |
|              | While visiting the Parallel Home brand experience, my body was in the room, but my mind was inside the virtual world.       |  |
|              | While visiting the Parallel Home brand experience, time went by very quickly.   |  |
|              | While visiting the Parallel Home brand experience, I had the sensation of losing track of time.                             |  |
|              | <i>After visiting the Parallel Home brand experience, I felt as if I had come back to the "real world" after a journey.</i> |  |

|  |  |  |
|--|--|--|
|  | While visiting the Parallel Home brand experience, I felt highly skilled at moving around. |  |
|--|--|--|

The variables used pre-established scales, presented in the questionnaire as follows:

**Consistency:** three items were used to measure consistency, adopted and adapted from Van Den Bosch, Elving and De Jong (2006) scale, consisting of 8 items to assess CVI consistency. This versatile scale has been adopted in the literature to assess consistent vs inconsistent visual identity in social media (Kaur & Kaur, 2021), and other research regarding visual identity (e.g., Tourky *et al.*, 2020).

**Brand excitement:** five items were used to assess the excitement dimension of brand personality, based on Aaker (1997) scale consisting of five dimensions, 15 facets, and 42 traits or items. One of the dimensions is named excitement, which provides 4 facets and 11 items. This scale is a highly renowned brand personality measurement scale and the most widely used, and therefore strongly validated in the literature to assess brand personality, which makes it highly relevant and reliable (Anandkumar and George, 2011; Bajaj & Bond, 2018; Cai & Mo, 2020).

**Authenticity:** measured using 6 items based on Bruhn *et al.* (2012), a well-established multidimensional measurement scale consisting of 4 dimensions and 15 items, widely used in research on brand authenticity (e.g., Fritz, Schoenmueller and Bruhn, 2017; Oh *et al.*, 2019 ; Rodrigues, Pinto Borges and Sousa, 2022). In addition, and a single-item (e.g., “the brand reflects a timeless design”) derived from Campagna, Donthu and Yoo (2023) scale composed by 12 items, was selected due to its contemporary approach considering brands constantly evolving beyond rapidly changing market tendencies, and because the definition of authenticity suggested by this 2023 study fully matched Bruhn *et al.* (2012) scale and is aligned with the conceptual analysis of brand authenticity developed in this study.

**Flow:** measured using ten of the sets of 13 items proposed by Novak, Hoffman and Yung (2000) to measure flow related specifically to marketing activity on online user experiences in interactive web spaces (online), therefore experienced by human-computer interaction. This scale has been used in different settings such as online shopping experiences (e.g., Kulviwat *et al.*, 2016), also has been broadly used on gaming studies (e.g., Lee, Yang and Hung, 2017) and in 3D virtual environments (e.g., Hooker *et al.*, 2019; Han *et al.*, 2020).



Two questions regarding technical issues experienced and quality of resolution were also included and adapted from the quality/performance items proposed by Choi *et al.* (2023), who found that these factors matter for participants' perceptions and evaluations of the metaverse experience. A question on participants' previous experience in the metaverse was adapted from the web usage items proposed by Novak, Hoffman and Yung (2000) and Balakrishnan *et al.* (2024) as covariates.

### 3.7 ETHICAL CONSIDERATIONS

This study has been granted ethical approval from the Research Ethics Committee - York Business School, reference ETH2425-0182.

This study does not require extensive time for participants to complete, as it involved a single session in the metaverse, followed by a single questionnaire. It also carried minimal risk, as participants were not required to wear a VR headset to avoid any dizziness, VR fatigue, or discomfort that might occur for some people. Before starting the experiment on the Prolific platform, informed consent included information about voluntary participation, indicating that participants could withdraw from the study before their data was collected by closing the browser tab.

Regarding data collection, the information included that the data would be stored securely, kept completely anonymous, and used for research purposes only. The questionnaire did not ask for any personally identifiable information beyond gender and age. Therefore, a response could not be traced back to specific individuals, as no identifiable information has been used to identify them. The data was downloaded from Qualtrics as a .sav file to open in SPSS software and stored securely in the YSJU OneDrive account of the author of this study in a specific folder. Although this study did not require any identifiable personal data, participants, before giving agreement, were also informed in Prolific that personal data would be treated in accordance with the UK General Data Protection Regulation (UK GDPR) and the Data Protection Act 2018, controlled by York St John University.

## 4. RESULTS / FINDINGS

This experimental study aimed to understand consumers' perception of brand authenticity (DV) in the metaverse. To this end, this study focused on assessing the influence of the logo (dynamic vs. static) (IV), the mediating role of the exciting dimension of brand personality and visual consistency (MedV), and the moderating role of flow (ModV).

Reliability analysis of the measurement scales, descriptive, and statistical analyses were conducted using IBM SPSS Statistics. The results are presented as follows:

### 4.1 RELIABILITY SCALES

A reliability analysis was performed to assess the measurement scales of the variables: brand visual consistency, brand excitement, brand authenticity and flow. The results of the Cronbach's Alpha ( $\alpha$ ) to measure reliability scales, traditionally used to assess the internal consistency of the proposed items (Field, 2024), provided evidence of strong reliability of the scales measuring each variable. According to Field (2024), an  $\alpha$  coefficient is traditionally considered acceptable with a value of 0.7 to 0.8. As the results shows  $\alpha > 0.8$  the interpretations were based on Cohen, Manion and Morrison (2018, p. 774), indicating that three of the proposed scales show a very highly reliable internal consistency ( $> 0.90$ ) and one shows a highly reliable internal consistency (0.80 - 0.90). The Cronbach's Alpha ( $\alpha$ ) measurement scales results consisting of four constructs, are contained in Table 4.

*Table 4: Cronbach's Alpha ( $\alpha$ ) measurement scales.*

| VARIABLE                 | N OF ITEMS | CRONBACH'S ALPHA |
|--------------------------|------------|------------------|
| Consistency              | 3          | .81              |
| Personality (excitement) | 5          | .90              |
| Authenticity             | 6          | .90              |
| Flow                     | 10         | .93              |

### 4.2 DESCRIPTIVE ANALYSIS

This section provides an overview of the characteristics of the sample, as well as presenting descriptive statistics on the variables examined in this study.

#### 4.2.1 DEMOGRAPHICS

The total sample ( $N$ ) consisted of 346 participants, 173 per condition (static and dynamic), ranging between the ages of 18 and 78 years old, with a mean ( $M$ ) of 38.49 years old ( $SD = 12.22$ ). The frequency distribution showed that 23.3% of the total sample reported being under 28 years old, thus belonging to the youngest generation of adults (Gen Z); while a substantially higher 48.7% were between 29 and 44 years old, belonging to the millennial generation; and the remaining 28% reported being over 45 years of age, belonged to Gen X and baby boomers. Therefore, the participants were mostly millennials, considered young adults to early middle-aged.

Regarding gender, the sample was quite balanced between males and females, consisting of 174 males (50.6%), 168 females (48.8%), 2 non-binary (.6%), and 2 missing or prefer not to say (.6%), which is in line with other studies conducted in the metaverse reporting a similar sample (e.g., Gabisch and Gwebu, 2011).

Participants' prior experience in the metaverse data were collected from the question "I am very familiar with the metaverse". Participants' responses suggest a slightly low prior experience in the metaverse, evidenced by a mean of 3.97 ( $SD = 1.72$ ), just below the neutral point of 4 (7-point Likert scale).

#### 4.3 DESCRIPTIVE AND STATISTICAL ANALYSIS OF VARIABLES

Multi-item scales were used to measure each construct and then computed in SPSS to create a variable representing the average of the items on each scale prior to performing descriptive statistics and hypothesis testing.

Continuing with the analysis from the total sample (346 participants), the participants' perception of brand visual consistency, brand excitement and brand authenticity were rated similarly among them, with a mean score of: brand visual consistency ( $M = 5.66$ ,  $SD = .89$ ), brand excitement ( $M = 5.12$ ,  $SD = 1.12$ ) and brand authenticity ( $M = 5.11$ ,  $SD = 1.11$ ). Instead, the participants' experienced level of flow scored slightly above the neutral point, ( $M = 4.50$ ,  $SD = 1.31$ ). To interpret the meaning of the mean score and determine if it significantly differed from the neutral point of 4 (7-point Likert scale) and its effect size, one-sample  $t$ -test were conducted, evidencing that participants perceived statistically significant high levels of brand visual consistency,  $t(345) = 34.79$ ,  $p < .001$ ,  $d = 1.87$ , 95% CI [1.70, 2.04]; brand excitement,  $t(345) = 18.53$ ,  $p < .001$ ,  $d = 1.00$ , 95% CI [.87, 1.13]; and brand authenticity,  $t(345) = 18.49$ ,  $p < .001$ ,  $d = .99$ , 95% CI [.87, 1.12]. While the participants

perceived flow significantly different from neutral, but not too high,  $t(345) = 7.08$ ,  $p < .001$ ,  $d = .38$ , 95% CI [.27, .49].

Regarding the technical quality of the experience, two questions have been used to assess it in relation to the visual quality and the technical issues they may have experienced. The question “I have experienced the metaverse in high resolution” rated  $M = 4.84$  ( $SD = 1.61$ ),  $t(345) = 9.77$ ,  $p < .001$ ,  $d = .53$ , 95% CI [.41, .64] indicating a medium effect size and statistical significance, suggesting that the reported image resolution shows a moderate although meaningful difference from the neutral point. However, the question “My experience in the metaverse was free of technical issues (e.g. bugs)” was rated  $M = 5.92$  ( $SD = 1.51$ ),  $t(345) = 23.75$ ,  $p < .001$ ,  $d = 1.28$ , 95% CI [1.13, 1.42] suggesting that in general participants experienced a good technical performance.

#### 4.3.1 HYPOTHESIS TESTING

This section presents the results of the hypothesis testing, assessed by various statistical tests. Group codes used in the analysis were as follows: 1= static, 2= dynamic.

Table 5: Hypotheses

| HYPOTHESES  |   | OUTCOMES  | TEST NAME                 | TEST RESULTS  |
|-------------|---|---|---------------------------|---|
| <b>H1.a</b> | In the metaverse, a brand with a dynamic logo is perceived as less visually consistent than a brand with a static logo. | Not Supported                                   | <i>t</i> -test            | $t(344) = -1.12$ , $p = .23$<br>$d = -.13$ , 95% CI [-.34, .08]   |
|             |   | Tentatively Supported in the opposite direction | Mann-Whitney U            | $U = 13301.0$<br>$z = -1.81$<br>$p = .07$<br>$r = -0.10$          |
| <b>H1.b</b> | In the metaverse, a brand with a dynamic logo is perceived as visually consistent.                                      | Supported                                       | One-sample <i>t</i> -test | $t(172) = 23.66$ , $p < .001$<br>$d = 1.80$ , 95% CI [1.56, 2.04] |
| <b>H1.c</b> | Brand visual consistency positively   | Supported                                       | Bivariate correlation     | $r(344) = .67$<br>$p < .001$<br>$R^2 = .45$                       |

|                         |  |                       |                       |  |
|-------------------------|--|-----------------------|-----------------------|--|
|                         | influences the perception of brand authenticity in the metaverse.  |                       |                       |  |
| <b>H1.d</b>             | Brand visual consistency mediates the effect of the logo type (dynamic vs static) on brand authenticity.     | Not Supported         | Simple Mediation      | $X \rightarrow M: b = .11, p = .23, t(344) = 1.20$<br>$M \rightarrow Y: b = .83, p < .001, t(343) = 16.47$<br>$X \rightarrow Y: b = .08, p = .39, t(343) = .87$<br>Indirect effect (s) of X on Y:<br>$b = .09$ 90% CI [-.04, .23]<br>$ps = .09$ , 90% CI [-.03, .20] |
| <b>H2</b>               | A brand with a dynamic logo in the metaverse is perceived as more authentic than a brand with a static logo. | Not Supported         | t-test                | $t(344) = -1.44, p = .15$<br>$d = -.16$ , 95% CI [-.37, .06]   |
| <b>To complement H2</b> | People familiar with the metaverse perceive brands as more authentic.  | Supported             | Bivariate Correlation | $r(344) = .28$<br>$p < .001$<br>$R^2 = .08$  |
| <b>To complement H2</b> | <i>A brand with a dynamic logo is perceived as authentic.</i>  | Supported             | One-sample t-test     | $t(172) = 13.95, p < .001$<br>$d = 1.06$ , 95% CI [.87, 1.25]  |
| <b>To complement H2</b> | <i>A brand with a static logo is perceived as authentic.</i>   | Supported             | One-sample t-test     | $t(172) = 12.22, p < .001$<br>$d = .93$ , 95% CI [.75, 1.11]   |
| <b>H3.a</b>             | <i>A brand with a dynamic logo vs</i>  | Tentatively Supported | t-test                | $t(344) = -1.67, p = .096$   |

|             |  |                       |                       |   |
|-------------|--|-----------------------|-----------------------|---|
|             | <i>static is perceived as a brand with an exciting personality.</i>                              |                       |                       | $d = -.18, 90\% \text{ CI } [-.36, -.002]$  |
|             |  | Supported             | Mann-Whitney U        | $U = 13139.0$<br>$z = -1.97$<br>$p = .049$<br>$r = -0.11$   |
| <b>H3.b</b> | Brand excitement positively influences the perception of brand authenticity in the metaverse.    | Supported             | Bivariate correlation | $r(344) = .87$<br>$p < .001$<br>$R^2 = .76$   |
| <b>H3.c</b> | Brand excitement mediates the effect of the logo type (dynamic vs static) on brand authenticity. | Tentatively supported | Simple Mediation      | $X \rightarrow M: b = .20, t(344) = 1.67, p = .096, 90\% \text{ CI } [.003, .40]$<br>$M \rightarrow Y: b = .86, t(343) = 32.28, p < .001, 90\% \text{ CI } [.82, .91]$<br>$X \rightarrow Y: b = -.0008, t(343) = -.01, p = .99, \text{ and } 90\% \text{ CI } [-.10, .10]$<br>Indirect effect (s) of X on Y:<br>$b = .17, 90\% \text{ CI } [.002, .34]$<br>$ps = .16, 90\% \text{ CI } [.002, .31]$ |
| <b>H4.a</b> | Flow positively influences the perception of brand authenticity.                                 | Supported             | Bivariate correlation | $r(344) = .75$<br>$p < .001$<br>$R^2 = .56$   |
| <b>H4.b</b> | Flow positively influences the perception of brand excitement.                                   | Supported             | Bivariate correlation | $r(344) = .71$<br>$p < .001$<br>$R^2 = .50$   |
| <b>H4.c</b> | Flow moderates the effect of the   | Not Supported         | Linear Regression     | $X \rightarrow Y: b = .13, t(342) = .44, p = .66$   |

|  |  |  |  |   |
|--|--|--|--|---|
|  | logo (dynamic vs static) on consumers' perception of brand authenticity. |  |  | $W \rightarrow Y: b = .64, t(342) = 6.40, p < .001, sr^2 = .053$<br>$XW \rightarrow Y: b = -.002, t(342) = -.03, p = .97$ |
|--|--|--|--|---|

Hypotheses have been testing to assess the consumers' perception of brand authenticity in the metaverse, the mediating role of brand excitement and consistency, and the moderating role of flow, divided in four sets, related to:

1. **H1.a, H1.b, H1.c, H1.d:** Brand visual consistency and its mediating role on brand authenticity.
2. **H2:** Brand authenticity.
3. **H3.a, H3.b, H3.c:** Brand excitement and its mediating role on brand authenticity.
4. **H4.a, H4.b, H4.c:** Flow and its moderating role on brand authenticity.

The hypotheses are presented in an order that better reflects the logical sequence of the statistical analyses, rather than following the logic of the numerical order that the narrative of the Literature Review follows. Therefore, this section begins with bivariate correlations, continues with direct and indirect effects (mediators and moderator), and ends with a table summarising this section.

### Bivariate Correlations

Bivariate correlation was conducted to analyze the relationship between two variables using Pearson's product-moment correlation coefficient, specifically to assess the relationship between brand excitement and brand authenticity, flow and brand authenticity, and also between brand excitement and flow. All these variables were found to be positively correlated.

The correlation between consistency and brand authenticity results indicates a very strong and positive relationship, evidenced by a significant  $p$ -value,  $p < .001$ , and a large effect size,  $r(344) = .67$ , as it is  $\geq 0.50$  (Field, 2024, p. 383). That can also be interpreted as about 45% of the variance in brand authenticity could be explained by brand consistency, according to the coefficient of determination ( $R^2$ ) being calculated  $R^2 = .67^2 = .45$ ,  $.45 \times 100 = 45$  (Field, 2024, p. 393). Those results suggested that the higher the perception of

consistency, the higher the perception of authenticity, therefore **H1.c** was supported, so it is possible to state that *brand visual consistency positively influences the perception of brand authenticity in the metaverse*.

The variables of brand excitement and brand authenticity have been found to be very highly correlated, as evidenced by the statistically significant results,  $p < .001$ , and a correlation coefficient ( $r$ ) showing a very large positive linear correlation effect size, evidenced by the result of  $r(344) = .87$ , and the  $R^2 = .76$  suggesting that the 76% of the variance in brand authenticity could be explained by brand excitement. As the perception of the exciting brand's personality dimension increases, so does the perception of its authenticity, meaning that *brand excitement positively influences the perception of brand authenticity in the metaverse*. Therefore, **H3.b** was supported.

Similarly, a highly positive relationship between flow and brand authenticity was found evidenced by its correlation analysis, showing similar results to **H3.b**, with a statistically significant  $p < .001$  and a strong linear correlation effect size,  $r(344) = .75$ , and a coefficient of determination  $R^2 = .56$ , indicating that the 56% of the variance in brand authenticity could be explained by flow. Therefore, *flow positively influences the perception of brand authenticity*, suggesting that **H4.a** was also supported.

In the same line, flow is highly positively associated with brand excitement, based on the large correlation results of Pearson's  $r(344) = .71$ ,  $R^2 = .50$  suggesting that 50% of the variance in brand excitement could be explained by flow, and with a significant  $p < .001$ , supporting **H4.b**, indicating that *flow positively influences the perception of brand excitement in the metaverse*. Therefore, the higher the level of flow people experienced, the more exciting the brand was being perceived.

### Direct and indirect effects

The design of a complex model includes direct and indirect effects, incorporating both mediating and moderating variables. Direct effects have been analysed from the relationship between the IV (type of logo: static vs dynamic) and the DV (brand authenticity), and other variables such as familiarity and DV; while indirect effects were assessed through consistency and brand excitement as a mediator, and flow as a moderator.

A  $t$ -test and a Mann-Whitney U test were conducted to examine **H1.a** *In the metaverse, a brand with a dynamic logo is perceived as less visually consistent than a brand with a static*



logo. While  $t$ -test showed that **H1.a** was not supported,  $t(344) = -1.19$ ,  $p = .23$ ,  $d = -.13$ , 95% CI [-.34, .08], the Mann-Whitney U test showed a tentatively supported **H1.a** indicating marginal significance in brand visual consistency scores between the static group ( $N = 173$ , Mean Rank = 163.88) and the dynamic group ( $N = 173$ , Mean Rank = 183.12),  $U = 13301.0$ ,  $z = -1.81$ ,  $p = .071$ . Although the  $t$ -test is robust to normality given the large sample size and equal groups, the Mann-Whitney U test was conducted due to non-normal distribution, evidenced by the results of a negative skewness ( $z = -6.43$ ), which, according to Hair *et al.* (2010, p. 73) and Field (2024),  $z$ -value for skewness should fall within the acceptable normality range of  $\pm 1.96$ . The skewness  $z$ -value was calculated according to Field (2024), using the formula:  $z\text{-value} = \text{skewness value} / \text{std error}$ .

However, it is important to also examine if **H1.b** *in the metaverse, a brand with a dynamic logo is perceived as visually consistent (instead of inconsistent)*. Therefore, a one-sample  $t$ -test (test value = 4) was performed, revealing that the dynamic logo was perceived as highly consistent,  $t(172) = 23.66$ ,  $p < .001$ , with a large effect size,  $d = 1.80$ , 95% CI [1.56, 2.04].

Statistical analysis of the effect of logo type (IV) on the perception of brand authenticity (DV) assessing **H2** *A brand with a dynamic logo in the metaverse is perceived as more authentic than a brand with a static logo*, shows a not-significant direct effect, evidenced by independent  $t$ -test showing  $t(344) = -1.44$ , and a  $p$ -value of .15, therefore greater than the .05 significance level. Although it is in the right direction predicted by **H2** showing dynamic logos performed slightly better than static logos on brand authenticity perception, with the mean difference expressed as  $\bar{X}_{\text{static}} - \bar{X}_{\text{dynamic}} = 5.0212 - 5.1936 = -.17245$ . A small and non-significant effect was observed,  $d = -.16$ , 95% CI [-.37, .06], as according to Field (2024, citing Cohen 1988, 1992) 0.2 suggests a small effect, 0.5 a medium and 0.8 a large effect.

This is in line with the results of the Mann-Whitney U test ( $U = 13453.5$ ,  $z = -1.63$ ,  $p = .10$ ), conducted due to the result of the skewness showed non-normality ( $z = -3.75$ ), suggesting no statistically significant difference in the perception of brand authenticity between the static group ( $N = 173$ , Mean Rank = 164.77) and the dynamic group ( $N = 173$ , Mean Rank = 182.23).

Although **H2** was not supported, a one-sample  $t$ -test was conducted for each group to assess participants' perception of brand authenticity. The results showed that a brand with a dynamic logo was perceived as highly authentic, suggested by a significant  $p < .001$ ,  $t(172) = 13.95$ , with a large effect size evidenced by Cohen's  $d = 1.06$ , 95% CI [.87, 1.25]. The

brand with a static logo also showed a statistically significant  $p < .001$ ,  $t(172) = 12.22$ , with a large effect size,  $d = .93$ , 95% CI [.75, 1.11]. That indicates brands using a static and a dynamic logo were perceived as highly authentic, suggesting that, although a no significant difference was found between the types of logos used, overall, participants perceived the brand as highly authentic. Therefore, the brand was perceived as highly authentic, but there is no evidence to indicate whether a brand with a dynamic logo was perceived as more authentic than a brand with a static logo.

However, an interesting finding is related to the perception of brand authenticity based on participants' previous experience in the metaverse, which shows that people familiar with the metaverse perceive brands as more authentic, according to the results of a Pearson's correlation showing a statistically significant positive correlation between familiarity with the metaverse and brand authenticity,  $r(344) = .28$ ,  $p < .001$ ,  $R^2 = .08$ , indicating that approximately 8% of the variance in brand authenticity could be explained by familiarity.

Regarding **H3.a** *A brand with a dynamic logo vs static logo is perceived as a brand with an exciting personality*, it was assessed using both independent  $t$ -tests and non-parametric Mann-Whitney U test. On the one hand, the  $t$ -test showed a trend toward significance,  $t(344) = -1.67$ ,  $p = .096$ , 95% CI [-.44, .04] 90% CI [-.40, -.002],  $d = -.180$ , 95% CI [-.39, .03] 90% CI [-.36, -.002], and in the right direction, indicating that people may perceive a brand with a dynamic logo as more exciting than one with a static logo. Therefore, according to the  $t$ -test, **H3.a** was tentatively supported. On the other hand, the Mann-Whitney U test showed a statistical significance in brand excitement scores between the static group ( $N = 173$ , Mean Rank = 162.95) and the dynamic group ( $N = 173$ , Mean Rank = 184.05),  $U = 13139.0$ ,  $z = -1.97$ ,  $p = .049$ . Therefore, according to the Mann-Whitney U test, **H3.a** was supported. This difference in results can be due to slight deviations from normality in the data, as indicated by skewness  $z$ -value of -4.3; thus, it may be appropriate to consider the non-parametric test as more reliable to support this hypothesis.

#### *The mediating role of consistency and brand excitement:*

The indirect effect of the logo (dynamic vs static) on brand authenticity, mediated by brand excitement and brand consistency, was examined using a simple mediation model analysis. The brand consistency mediation model tested the independent variable (X: Logo), the mediator (M: Consistency), and the dependent variable (Y: Authenticity) to assess **H1.d** *Brand visual consistency mediates the effect of the logo type (dynamic vs static) on brand authenticity*; while the brand excitement mediation model tested the independent variable (X: Logo), the mediator (M: Excitement), and the dependent variable (Y: Authenticity) to assess

**H3.c** *Brand excitement mediates the effect of the logo type (dynamic vs static) on brand authenticity.* PROCESS macro version 4.2 (Hayes, 2022) for IBM SPSS Statistics was used. The mediation analyses were performed according to Hayes (2018, p. 555) simple mediation, model 4, and a level of confidence of 90% and a bootstrap sample of 5000. The results showed:

**H1.d:** The a-path of the mediation ( $X \rightarrow M$ ) was not significant,  $b = .11$ ,  $t(344) = 1.20$ ,  $p = .23$ ; the b-path ( $M \rightarrow Y$ ) was significant,  $b = .83$ ,  $t(343) = 16.47$ ,  $p < .001$ , 90% CI = [.75, .92]; and the c'-path ( $X \rightarrow Y$ ) was not-significant,  $b = .08$ ,  $t(343) = .87$ ,  $p = .39$ . The indirect effect (s) of X on Y was  $b = .09$  90% CI [-0.04, .23] was not significant. Partially standardized indirect effects,  $ps = .09$ , 90% CI [-0.03, .20], showed a medium effect size, based on Cohen (1988) suggesting as small effect: ~0.01, medium effect: ~0.09 and large effect: ~0.25. However, as the confidence interval (CI) includes zero, the effect is not statistically significant. These results are coherent with the not-significant direct effect showed in the  $t$ -test conducted to assess if a brand with a dynamic logo is perceived as more consistent than one with a static logo. Therefore, **H1.d** was not supported although in the right direction. B path was significant, in line with the bivariate correlation between brand visual consistency and brand authenticity (**H1.c**). However, there was no significant mediation effect of consistency on the relationship between the logo and brand authenticity, therefore, **H1.d** was not supported.

Another indirect effect studied was the relationship between the type of logo (static vs dynamic) (X) and brand authenticity (Y) and the mediated role of brand excitement (M), in order to assess **H3.c** *Brand excitement mediates the effect of the logo type (dynamic vs static) on brand authenticity*, showing that the a-path of the mediation ( $X \rightarrow M$ ) was marginally significant,  $b = .20$ ,  $t(344) = 1.67$ ,  $p < .10$ , 90% CI [.003, .40]; the b-path ( $M \rightarrow Y$ ) was significant,  $b = .86$ ,  $t(343) = 32.28$ ,  $p < .001$ , 90% CI [.82, .91]; and the c'-path ( $X \rightarrow Y$ ) was not-significant,  $b = -.0008$ ,  $t(343) = -.01$ ,  $p = .99$ , and 90% CI [-.10, .10], which is coherent with the not-significant direct effect showed in the  $t$ -test. The result of the indirect effect(s) of X on Y was significant,  $b = .17$ , 90% CI [.002, .34]. Partially standardized indirect effects,  $ps = .16$ , 90% CI [.002, .31], also indicated a statistically significant and a medium to large size mediation effect of brand excitement. Therefore, **H3.c** was tentatively supported, because the indirect effect CI did not include zero at 90%. This suggests that the logo may have affected authenticity via personality. Therefore, brands with dynamic logos may be perceived as more authentic because they are more exciting, rather than for another reason.

Table 6: Summary of Mediating variables.

| Mediations   | Indirect effects of x on X     | Partially standardized indirect effects |
|--|--------------------------------|---|
| <b>H1.d</b> Logo → Consistency → Authenticity              | $b = .09$ , 90% CI [-.04, .23] | .09, 90% CI [-.03, .20]                 |
| <b>H3.c</b> Logo → Personality (excitement) → Authenticity | $b = .17$ , 90% CI [.002, .34] | .16, 90% CI [.002, .31]                 |

#### *The moderating role of flow*

The moderating role of flow has been tested to assess **H4.c** *Flow moderates the effect of logo (dynamic vs. static) on consumers' perception of brand authenticity*, as illustrated in a conceptual diagram as a simple moderation model (see Figure 13). A linear regression test has been performed in SPSS using the enter method. The regression model includes the dependent variable of authenticity, and the logo (dynamic or static), flow and the interaction flow\*logo as the predictors, depicted in the statistical diagram (see Figure 14).

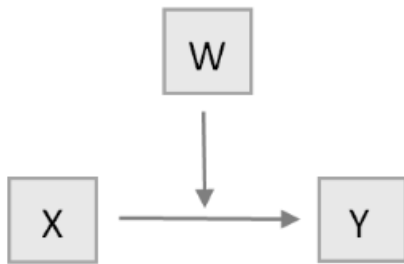


Figure 13: Conceptual Diagram. X Logo, Y Authenticity, W Flow.

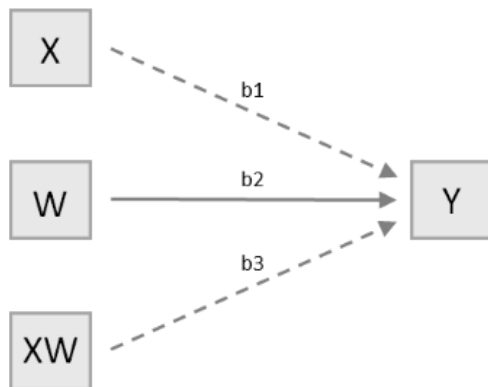


Figure 14: Statistical Diagram. X Logo, Y Authenticity, W Flow, XW Interaction Flow\*Logo.

The results showed that flow has a positive and significant influence on brand authenticity (path b2:  $W \rightarrow Y$ ),  $t(342) = 6.40$ ,  $p < .001$ , with  $b = .64$ , which is consistent with **H4.a**. The

effect size has been calculated considering the value of the part-correlation (.23) squared to obtain the squared part-correlation coefficient ( $sr^2$ ) value of .053, indicating that 5.3% of the variance in brand authenticity is uniquely explained by the direct effect of flow. Squared part-correlation has been used because, according to Warner (2020), it is considered the preferred measure for reporting effect size in multiple regression. However, there was not significant moderation effect of flow (W) on the relationship between the logo (predictor) and brand authenticity (outcome) as the interaction between flow and logo (path b3:  $XW \rightarrow Y$ ) was not statistically significant,  $b = -.002$ ,  $t(342) = -.03$ ,  $p = .97$ , showing also a very small moderation effect size, given by the interpretation of the squared partial correlation of flow\*logo interaction variable. Therefore, no evidence was found to support **H4.c**. Path b1 ( $X \rightarrow Y$ ) was also not significant,  $b = .13$ ,  $t(342) = .44$ ,  $p = .66$ , while path b2 ( $W \rightarrow Y$ ) was significant, as shown before. However, the absence of a significant interaction indicates that flow did not significantly moderate the effect of the logo on brand authenticity.

## 5. DISCUSSION

This research aimed to address the research question (RQ): How do dynamic brand logos within the metaverse influence consumers' perception of brand authenticity? The mediating role of brand visual consistency and brand excitement, as well as the potential moderating effect of flow were also explored.

To answer the RQ, a total of eleven hypotheses plus three complementary ones have been proposed and empirically assessed by a quantitative experimental study (see chapter 4. Results/Findings), and further critical analysis and interpretation of the results have been conducted by linking, comparing, and contrasting them with the theories and findings of previous research contained in the literature review and presented following the same thematic structure, which also provides the sequential order to the hypotheses.

Therefore, the themes addressed in this chapter are:

- 5.1. Brand visual consistency
- 5.2. Brand authenticity
- 5.3. Brand excitement
- 5.4. Flow

### 5.1. BRAND VISUAL CONSISTENCY

This study aims to demonstrate that brands with dynamic logos can be perceived as visually consistent instead of inconsistent. Therefore, the hypothesis was formulated based on the traditional assumption that the logo must be applied uniformly, without changes, for the brand to be perceived as visually consistent, in order to understand whether the traditional paradigm is supported or, if it is rejected in favour of the alternative paradigm. Thus, **H1.a** *In the metaverse, a brand with a dynamic logo is perceived as less visually consistent than a brand with a static logo*, was tested. The null hypothesis that there is no difference in perceived consistency between dynamic and static logos was not rejected, indicating that no statistical evidence was found that dynamic logos are perceived as less consistent than static logos (as suggested by the traditional paradigm). Surprisingly, the non-parametric test, although it did not reach conventional significance ( $p = 0.07$ ), suggested a trend in the opposite direction, in favour of dynamic logos. This evidence that brands with dynamic logos in the metaverse were perceived with a similar or a slightly higher levels of visual consistency than brands with static ones, which is an important finding of this study,

suggesting that brands with dynamic logos in the metaverse are perceived as visually consistent, instead of inconsistent. This finding supports the debate of CVI consistency / CVI inconsistency (Gregersen and Johansen, 2018), evidencing that brand consistency allows for a more flexible approach, with some inconsistencies being still perceived as consistent; while could potentially surprise followers of the traditional paradigm and support who advocate for a less rigid visual consistency concept approach (e.g., Neumeier, 2003; Scher, 2024, 0:55), while at the same time redefine the brand visual consistency concept to develop brands for the current and future scenarios. In this study, individuals perceived a dynamic logo as visually consistent perhaps because it makes sense with the innovative and dynamic nature of the metaverse, seeing the flexible nature of the dynamic logo aligned with a more contemporary vision of brand visual consistency.

Following the suggestion of Sääksjärvi *et al.* (2015), this study also tested logo variation (static vs. dynamic) in the metaverse context to measure brand consistency. The results of this study support Sääksjärvi *et al.* (2015) findings, which demonstrate that a logo with slight variations does not negatively affect consumers' perception of the brand, while challenging previous studies that suggested that people prefer logos without variations (e.g., Walsh, Winterich and Mittal, 2011).

**H1.a** results align with **H1.b** *In the metaverse a brand with a dynamic logo is perceived as visually consistent*, being supported, demonstrating a high perception of visual consistency. This finding empirically examine the debate about consistency-inconsistency on visual identity proposed by Gregersen and Johansen (2018), positively proving the alternative paradigm (inconsistency), showing that a brand with a dynamic logo can be perceived as consistent, in contraposition with the traditional paradigm suggesting that a brand to be perceived as consistent must use a highly standardised visual identity. Thus, a brand can be perceived as visually consistent following both, the traditional and alternative paradigm, redefining the concept of brand visual consistency. This suggests that, contrary to common assumptions, a dynamic logo may not necessarily lead to a perception of visual inconsistency, instead it can be perceived as consistent. Therefore, the alternative viewpoint that brands can allow for some inconsistencies and still being perceived as consistent was supported by this study.

Regarding the role of consistency in the perception of brand authenticity, and considering the current and future scenario, this study found that *brand visual consistency positively influences the perception of brand authenticity in the metaverse (H1.c)*. Thus, people who viewed the brand as visually consistent tended to rate the brand as more authentic, which is

in line with Gregersen and Johansen (2018) suggestion about VI should be flexible and adaptable, showing the willingness to evolve, to be perceived as authentic.

In relation to the mediation role of visual consistency between the effect of the type of logo (dynamic vs static) and the perception of brand authenticity, it was not possible to empirically prove this mediating role proposed in **H1.d** *Brand visual consistency mediates the effect of the logo type (dynamic vs static) on brand authenticity*, as results showed that the type of logo did not significantly influence the perception of brand authenticity directly and indirectly. This result occurred as static and dynamic logos are both considered similarly visually consistent. Because the predictor did not show enough variation to significantly influence M (consistency) as a pathway to Y (authenticity) which is essential for mediation. However, perceived visual brand consistency significantly contributed to a positive perception of brand authenticity ( $M \rightarrow Y$ ), which is in line with **H1.c**. However, as the predictor does not show significant difference, the condition necessary for mediation was not met.

## 5.2. BRAND AUTHENTICITY

This research found that in the metaverse, a brand with dynamic and static logo were both perceived as highly authentic. The brand with a dynamic logo was perceived as slightly more authentic, according to **H2 complement**. However, there was not a significant difference between them (**H2**), although it is in the right direction predicted by **H2** showing dynamic logos performed slightly better than static logos on brand authenticity perception, in line with **H2 complement** results. This suggests that although the overall brand was perceived to fit with the metaverse identity and consumers expectations, as was proposed in the literature review suggesting that VI should evolve to be perceived as authentic (Schallehn, Burmann and Riley, 2014; Gregersen and Johansen, 2022), it was not possible to be explained just by the dynamic design of the logo fitting with the dynamic nature of the metaverse, even when the findings suggest that brands with dynamic logos were perceived as slightly more authentic than brands with static logos, which can show a tendency that can be further explored.

To complement the idea found in the literature that brand authenticity perception is related to consumers' expectations, as consumers perceive brands as authentic when they perceive them as aligned with their self-identity and influenced by collective brand identification and standards expectations about the brand in a particular context (Fritz, Schoenmueller and Bruhn, 2017; Moulard, Raggio and Folse, 2021; Beverland and Cankurtaran, 2024), this study found that consumers perceive brands as more authentic when they are more familiar



with the metaverse (**H2 complement**), suggesting that previous experience in the metaverse may provide clearer expectations on the brand in the particular context of the metaverse that could positively influence their perception of brand authenticity.

To further analyse the results on brand authenticity, it is important to also consider the results on the role of brand excitement and flow; therefore, the discussions on brand authenticity continue at the end, concluding this discussion chapter.

### 5.3. BRAND EXCITEMENT

Instead, this study makes a valuable contribution by finding that brands with dynamic logos in the metaverse are perceived as more authentic (albeit marginally) than brands with static logos because of brand excitement (**H3.c**). This difference could be explained due to the findings of brand excitement positively influencing the perception of brand authenticity in the metaverse (**H3.b**), and a brand with a dynamic logo is perceived as more exciting than a brand with a static logo (**H3.a**). Therefore, dynamic logos in the metaverse make brands appear more authentic because they perceive it as more exciting, suggesting that people may perceived that the excitement dimension of brand personality fits with the excitement nature of the metaverse, which provides support to the idea of “fit in” presented in the literature review.

To further analyse this study's findings regarding the perception of brand excitement in the metaverse, it is important to understand the influence of the logo type (dynamic vs static) (5.3.1) and the specific context of the metaverse (5.3.2), in order to gain a deeper insight into the role of brand excitement on brand authenticity (5.3.3).

#### 5.3.1 THE ROLE OF THE LOGO IN THE PERCEPTION OF THE BRAND EXCITEMENT

Starting with the role of the logo, this experimental study conducted in the metaverse found that a brand with a dynamic logo is perceived as more exciting than a brand with a static logo (**H3.a**), evidenced by a statistically significant although modest effect size ( $r = -0.11$ ) in the non-parametric test, and a trend toward significance and in the right direction according to the  $t$ -test. Large perceptual differences between brands with static or dynamic logos were unlikely in this study, for three main reasons outlined below, which helps explain why even small effects can still be considered relevant.

The first is the subtle nature of the manipulation expressed in the slight variation of the logo type in both studies (static and dynamic). Both logos shared the same design (same typography, shape, corporate colour), used the same visual language (same images) in both studies and differed only in the development and display of the logo in the virtual space. The static version of the logo follows restrictive usage guidelines, allowing for limited flexibility such as using one color (magenta) plus the black and white version and its use as a watermark, being the most common allowed usage in static brand guidelines, and without allowing for changes in its form, i.e., by introducing depth and volume (3D). In a subtle contrast, the same logo was presented in a dynamic way, using the same corporate colour (magenta), while allowing for flexible colour usage with a wider colour palette, adding the 3D version used in the architecture, and an animated version, to show the flexibility and adaptability that a dynamic logo has. However, as the logo is identical in both versions, sharing the same shape, typography and main colour (magenta), and both are also using the same space and visual language, both logo types just differing by the logo usage, the static and dynamic versions are considered as a slight variation of the same logo.

Secondly, it is also key to note that the questionnaire is designed to assess brand perception using a static or dynamic logo, so it is not the logo that is perceived as exciting, it is the brand, which also makes it more difficult to isolate the effect of the logo.

Third, although the logo may indirectly evoke a brand personality trait (Aaker, 1997), the perception of a brand's personality is mostly perceived from its entire visual identity system. Therefore, as this study aims to assess the effect of the logo independently of the visual identity as a whole, isolating the specific influence of the logo on the perception of brand excitement, the expected result cannot be large, so having a small effect size is important as it demonstrates a directional tendency, supporting (according to non-parametrical test) or tentatively supporting (according *t*-test) **H3.a** *“A brand with a dynamic logo is perceived as more exciting than a brand with a static logo”*.

Therefore, after analysing these three reasons, the small effect size is considered as an important result to support the hypothesis in favour of brands with dynamic logos being positively perceived as more exciting than static ones.

This finding is also aligned with literature on the effect of the elements of the logo. As the design of the dynamic logo follows the design system named Container by Van Nes (2012) using the logo shape and changing its contained colour, pattern and textures, “adopting a chameleon-like behaviour” to show flexibility and adaptation to a new context such as the

metaverse (Lelis, 2019, p. 459). The change in its colour seems to not be a major reason to make the brand appear exciting, which can be explained by Lelis (2019) study suggesting that psychological perceptions of the colour in dynamic and static brands can respond to personal and cultural factors therefore may be subjective. Further, according to the findings of the experimental study conducted by Grohmann, Giese and Parkman (2013), typography has a bigger impact than colour in the perception of brand personality, as colour showed a small influence, which is in line with this study in which neither shape nor typography change, and colour was changed just partially (sharing the main colour and adding a wider colour palette in the dynamic version) resulting in a small effect size. The difference can also be explained because the dynamic logo used an animated version which could provide the perception of excitement according to Jun and Lee (2020). Therefore, as was suggested in the literature review, instead of focusing on each element of the logo, this study assessed the dynamic logo as a whole. Combining its flexible nature with the ability to transform and adapt may provide the perception of being "daring, spirited, imaginative, up-to-date" as descriptors of an exciting personality trait, stated by Aaker (1997, p. 351).

### 5.3.2 THE ROLE OF THE CONTEXT (THE METAVERSE) IN THE PERCEPTION OF BRAND EXCITEMENT

This study found that in the metaverse, the sense of *flow positively influences the perception of brand excitement (H4.b)*, which is in line with the premise made by Aaker (1999) suggesting that consumers can perceive their personalities aligned with the brand personality in relation to a specific context.

Therefore, this study aimed to understand if the virtual immersive environment could also be a factor influencing the perception of brand excitement, as people in the metaverse can experience the sense of flow. As mentioned previously in the 2. Literature Review chapter, according to the Flow Theory (Csíkszentmihályi, 1975) people tend to feel fun and joy when they feel fully engaged and focused on an activity, which can allow for the perception of brand excitement. Thus, this study found that flow significantly and highly positively influences the perception of brand excitement, supporting **H4.b**, evidenced by a large correlation result, showing that 50% of the variance in brand excitement perception could be explained by the experienced sense of flow. Therefore, this study supports the Flow Theory evidencing the positive influence of flow on excitement, in line with studies placed in virtual immersive environments suggesting that people tend to perceive the excitement dimension of brand personality more in a 3D virtual environment instead a 2D environment (De Gauquier *et al.*, 2019). Furthermore, this research's findings also support the findings of

Wang *et al.* (2015) study evidenced that the higher the levels of flow experienced, the larger was the positive perception of brand personality.

Likewise, and in line with the Wang *et al.* (2015), showing that the higher the level of flow experienced, the more positive the perception of brand personality; this research evidenced that flow and brand personality are highly related and specifically found that *flow positively influences the perception of brand excitement in the metaverse (H4.b)*.

### 5.3.3 THE ROLE OF BRAND EXCITEMENT IN THE PERCEPTION OF BRAND AUTHENTICITY

This study provides empirical evidence supporting **H3.b** *Brand excitement positively influences the perception of brand authenticity in the metaverse*, evidenced by a very high correlation, suggesting that 76% of the variance in brand authenticity could be predicted by the perception of brand excitement in the metaverse. This finding supports the idea of “fit in” presented in the literature review, suggesting that when brand personality traits align with the specific context (the metaverse), the perception of brand authenticity becomes enhanced because the excitement dimension of the brand personality aligns with the exciting nature of the metaverse. This also supports Aaker (1999) study findings, suggesting that consumers' personalities can vary slightly to fit brand personalities in relation to a specific context, which is relevant because when consumers' personalities align with brand personalities, they tend to identify better with the brand. Therefore, the idea of “fit in” found support in this research, as both self-identification and collective identification, according to the constructivist point of view of Beverland and Cankurtaran (2024) and the aspirational authenticity type proposed by Moulard, Raggio and Folse (2021), aligned to the brand. In addition to the fulfilment of social standards or expectations associated with a specific context (in this case the metaverse) providing consumers' perception of brand authenticity. Furthermore, as the excitement personality trait implies the perception of the brand being innovative and up-to-date, it is possible to also find support to Campagna, Donthu and Yoo (2023) brand authenticity definition with a contemporary point of view, considering the importance of trends following technological evolution, enduring through eras and shifting market tendencies.

Indeed, this study also revealed that brands with dynamic logos appear more authentic (albeit marginally) because of brand excitement (**H3.c**). Therefore, the role of brand excitement was found to be the most relevant in positively contributing to consumers' perception of brand authenticity in the metaverse, marginally mediating the effect of the type

of logo on brand authenticity perception. This suggests that dynamic logos may enhance perceptions of brand authenticity by making brands appear more exciting, fitting in the specific context of the metaverse.

It is essential to note that the questionnaire was designed to assess consumers' perception of a brand with a static or dynamic logo, rather than consumers' perception of the logo itself, which also made it more difficult to isolate the logo effect, reason why the simple mediation results of indirect effect(s) of X on Y, similarly to **H3.a**, was also considered as an important finding, in spite of the mediation effect only being significant at 90% CI, which is why **H3.c** is only tentatively supported. However, a moderate effect size ( $p_s = .16$ ) suggests that brand excitement mediates part of the relationship between the logo and brand authenticity, although it is not the sole pathway, which suggests that other factors may also play a role. This moderate effect size is particularly noteworthy given the complexity of human perception, especially in psychological and behavioural research where effects are often subtle (Pieters, 2017), in addition to the complexity of human-machine interaction, being experienced in a more realistic way due to the characteristics of the metaverse (Lee and Cho, 2023).

In the metaverse, people may tend to focus their attention more on the overall virtual experience than solely on the brand. This is because the immersive and interactive environment may be perceived as novel and even cognitively demanding (explaining also **H2 complement** evidencing familiarity matters) so participants may concentrate more on navigating the space or controlling their avatars than on evaluating the brand or paying attention to the logo. This phenomenon could be explained through the distraction-conflict theory (Baron, 1986), as suggested by Nah, Eschenbrenner and DeWester (2011) in their study when they found no significant direct effect of immersive 3D environments on brand equity, suggesting that this was due to the distraction effect. Similarly, the immersive 3D space in this research may have diverted participants' attention away from the logo, which could be one of the possible explanations on why the logo manipulation did not produce a conventionally significant overall effect on brand authenticity. However, this does not necessarily imply that the logo had no impact; instead, it highlights the complexity of assessing individual brand elements in the metaverse. This supports the idea that brand authenticity is perceived through the whole brand experience, including the visual identity as a whole, making it difficult to isolate the logo to be assessed independently.

The mediation role of brand excitement between the logo (static vs dynamic) and brand authenticity showed that the logo influences (albeit marginally) the perception of brand

excitement and does not directly affect brand authenticity, indicating that the mediator explains the process. It is important to note that it may be unreasonable to expect the logo to have the “superpower” to directly influence consumers’ perception of brand authenticity, because, according to Haviv (2018, 20:20), the logo just have the role of visually identifying the brand. However, as the logo can cause consumers to perceive certain brand personality traits (Aaker, 1997; Bajaj and Bond, 2018; Jun and Lee, 2020), this research study evidenced that a brand with a dynamic logo in the metaverse is perceived with reference to the excitement dimension of brand personality (**H3.a**, **H3.c** path  $X \rightarrow M$ ), and brand excitement influences brand authenticity (**H3.c** path  $M \rightarrow Y$ ). Therefore, this study showed that through brand excitement the dynamic logo has the potential to influence consumers’ perception of brand authenticity, making it possible to argue that brands with dynamic logos are perceived as more authentic (albeit marginally) because of brand excitement.

## 5.4. FLOW

Furthermore, as immersive virtual experiences differ from IRL and 2D digital ones, flow has been integrated in the equation to understand how it affects the perception of brand authenticity in this specific context where people tend to experience flow. Thus, flow was tested and the results reveals that, as was hypothesised, flow have an impact on brand excitement (**H4.b**) because people in a state of flow tend to feel joy and excitement, which can enhance the perception of the excitement of the brand. Flow help brands to be seen as aligned with the excitement nature of the metaverse which support this study idea of when consumers perceived a brand “fit in” the metaverse, they perceive it as authentic.

Noticeably, in line with brand visual consistency and brand excitement, this study also found that *flow positively influences the perception of brand authenticity* (**H4.a**), with 56% of the variance in brand authenticity explained by flow, revealing that the level of flow experienced matters. Therefore, brands should build brand experiences in the metaverse that strategically enhance the sense of flow. This finding is consistent with Hooker *et al.* (2019) study regarding consumers experiencing flow having a positive attitude toward the brand; and with Nah, Eschenbrenner and DeWester (2011) findings that flow, and especially the feeling of “being there” experienced in immersive virtual environments, provides the feeling of joy, which leads to more favorable consumer brand perceptions. This is consistent with this study’s finding regarding flow, as it provides the sense of joy and excitement that influences brand excitement, leading to the perception of brand authenticity.

Although flow has a significant influence on the perception of brand authenticity (**H4.a**) and brand excitement (**H4.b**), it was not possible to find a significant moderation effect of flow on the effect of logo type on brand authenticity (**H4.c**), as the interaction between flow and logo effect on brand authenticity was not statistically significant. This may suggest that flow influences brand perception from a wider aspect of the brand experience instead of altering perceptions driven by a particular brand visual element such as the logo, which can explain path b (flow → authenticity) showing a positive and statistical significance, in line with **H4.a**.

Therefore, despite the type of logo, the brand would benefit from the flow experienced by consumers in the metaverse, as flow contributes to enhancing the perception of brand excitement. When people perceive the brand as having an exciting personality trait, they will perceive that brand as more authentic, which influences brand authenticity perception.

### **Discussions chapter conclusions:**

To summarise, this study found that dynamic brands are more likely to be perceived as authentic in the metaverse than traditional static brands, because of brand excitement. This is because brands with dynamic logos are perceived as more exciting, and the perception of brand excitement has been found to lead to a positive perception of brand authenticity. Therefore, according to the results of this study, on the one hand, as logos can evoke a determined brand personality, dynamic logos are perceived with excitement personality and that type of personality fitting in the metaverse leads to the perception of brand authenticity. On the other hand, it is not the dynamic logo on its own to provide the perception of brand authenticity, because the logo has the power to identify the brand, however, it does not have the superpower to produce in consumers the perception of brand authenticity for its own.

It should not be claimed that brands with static logos are perceived as inauthentic in metaverses, as they can still be perceived as authentic brands (**H2 complement**). A complete visual identity may create an exciting personality, and because the state of flow can provide the perception of excitement. However, as brands with dynamic logos are perceived as slightly more exciting than brands with static ones, brands are perceived as slightly more authentic in the metaverse when using dynamic vs static logos. This was driven by the indirect effect evidencing brands with dynamic logos are perceived as more authentic (albeit marginally) because of brand excitement.

## 6. CONCLUSIONS

As major brands have been exploring the metaverse (e.g., Walmart, Adidas, Nike, Vans, Hugo Boss, Absolut Vodka, H&M, Gucci), and more brands are expected to join it, it is imperative to understand consumers' perception of brand authenticity in this environment, to enable brands to successfully enter these emerging virtual immersive market scenarios. After all, it has been demonstrated that consumers' perceptions and attitudes towards brands in the metaverse may also influence brands in real life (Gabisch and Gwebu, 2011; Pizzi, Vannucci and Aiello, 2020).

Therefore, in this rapidly evolving market scenario, with consumers adopting emerging technologies, companies must be able to introduce their brands into these new virtual spaces and consumers' new virtual lives, maintaining consistency across all their touchpoints (physical, digital, and virtual) and being perceived as an authentic brand. The importance of this lies in the possibility that the brand may be perceived as “out of place” or not “fitting in” to the metaverse, because most of them have not been developed to fit in 3D virtual spaces (Dwivedi *et al.*, 2023), which could negatively affect the perception of brand authenticity.

To address this contemporary challenge and due to the lack of studies on branding in immersive virtual scenarios, this research aimed to investigate how dynamic brand logos within the metaverse influence consumers' perception of brand authenticity. It also examined the role of brand visual consistency, brand excitement, and the potential effect of the sense of flow.

Overall, this study yields valuable findings that contribute to the existing literature on branding in the metaverse, fostering a deeper understanding of this emerging field of study. Furthermore, this study also offers several practical contributions that could be highly relevant for brand managers, brand strategists, and brand designers who are planning to introduce their brands into the metaverse, creating or adapting brand strategies and visual identity to be prepared for the future, and particularly to be used in immersive virtual environments being perceived as authentic brands.

### 6.1. THEORETICAL CONTRIBUTIONS



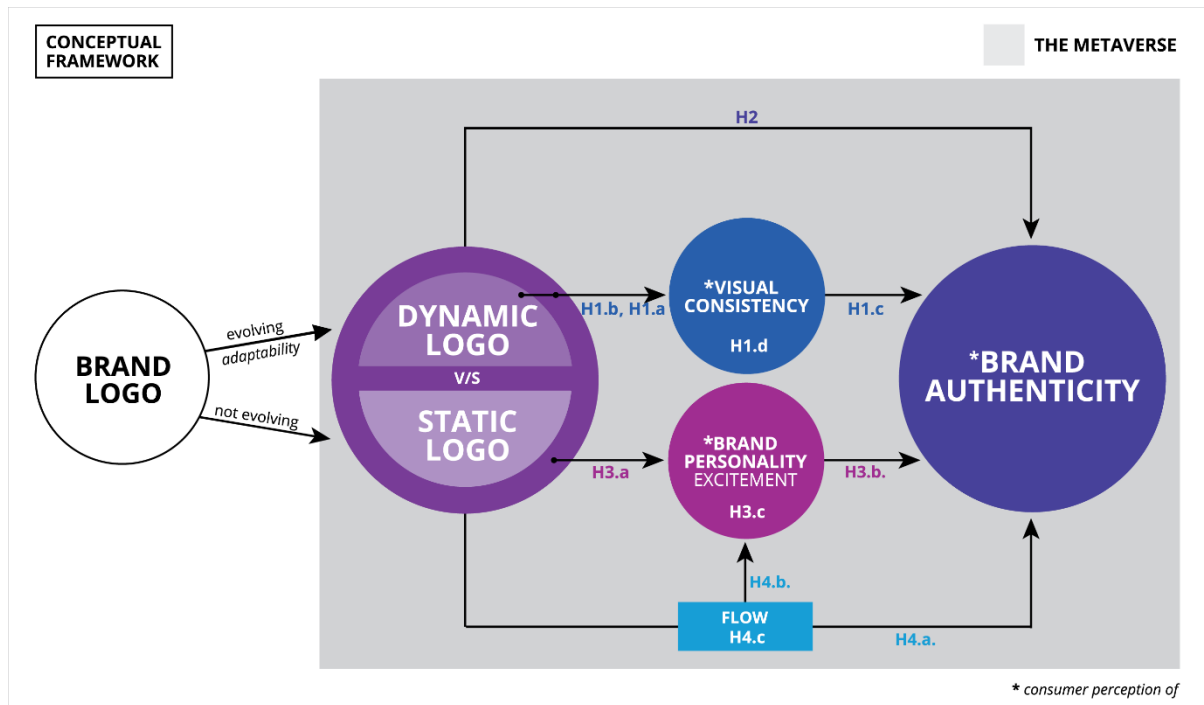


Figure 15: Conceptual Framework

To the best of my knowledge, this study is the first attempt to demonstrate the role of dynamic logos, brand excitement, brand visual consistency and flow in consumers' perception of brand authenticity in the metaverse.

This study examines the role of the static vs dynamic logo in brand authenticity (Logo → Brand authenticity) contributing to the existent literature, as according to Van Den Bosch, De Jong and Elving (2005) a direct link between visual identity and brand authenticity has not been usually observed. This was supported by this study's results showing full mediation of the effect of the logo type on brand authenticity through brand excitement. This finding is relevant because it reinforces the idea that the function of the logo is solely to visually identify the brand, as suggested by Haviv (2018, 20:20), while offering a novel contribution in highlighting that the logo alone does not have the power to make the brand appear more authentic; nevertheless, through the perception of brand excitement, the dynamic logo indirectly influences brand authenticity.

To unveil this indirect effect, it is important to firstly understand the role of the logo in brand excitement (Logo → Brand excitement). This study originally contributes by empirically proving the link between static vs dynamic logo and brand excitement, by demonstrating that, in the metaverse, a brand with a dynamic logo is perceived as more exciting than a brand with a static logo; while extending previous studies suggesting that the logo in fact may influence brand personality perception (e.g., Aaker, 1997; Kaur and Kaur, 2019), and,

specifically, the excitement dimension of brand personality (e.g., Bajaj and Bond, 2018; Cai and Mo, 2020; Jun and Lee, 2020).

Regarding the relationship between brand excitement and brand authenticity in the metaverse (Brand excitement → Brand authenticity), this study contributes to the existent literature by demonstrating that in the metaverse, brand excitement leads to a positive perception of brand authenticity. That is likely because, as was suggested in the literature review, people perceive brands as more authentic when they align with their self-identity and brand collective identification (Aaker, 1999; Lam *et al.*, 2010; Fritz, Schoenmueller and Bruhn, 2017; Moulard, Raggio and Folse, 2021), and social standards in a specific context (Fritz, Schoenmueller and Bruhn, 2017; Beverland and Cankurtaran, 2024). Therefore, this effect may be due to the exciting nature of the metaverse (De Gauquier, 2019), and the perception of the brand personality provided by experiencing flow (Wang, 2015), which was supported by this study findings showing flow influences the perception of brand excitement (Flow → Brand excitement is addressed later in this section). Thus, when consumers perceive the brand as exciting, the brand appears authentic in this specific virtual context.

Further, this study makes a novel contribution evidencing that in the metaverse the dynamic logos influences brand authenticity perception (albeit marginally) through its perceived brand personality (excitement dimension). That highlights the importance of brand personality conveyed by logos in the perception of brand authenticity. This mediating effect of logo types on brand authenticity, particularly in the metaverse, therefore in the contemporary context of brands facing the new virtual era, to the best of my knowledge, has never been tested in existing research.

This research also extends previous studies, such as the conducted by Kaur and Kaur (2019) which also empirically proved the mediating role of brand personality (including a hypothesis on the excitement dimension) between logos and brand image. Their finding is similar, but it did not specifically cover static vs dynamic logos and brand authenticity, and it was not in the context of the metaverse. Therefore, this study extended their research to a more specific construct (brand authenticity), a different conceptualization of logo type and a new context (metaverse). Furthermore, this study's findings also support the contemporary definition of brand authenticity proposed by Campagna, Donthu, and Yoo (2023), suggesting the importance of a brand's willingness to adapt to new market scenarios and technologies to be perceived as authentic, by showing that logo adaptability matters in the brand authenticity perception. This is because dynamic logos, being more flexible and adaptable, are found in this study to be perceived as more exciting than static logos (which are part of

rigid visual identities), thus aligning with the dynamic and exciting nature of the metaverse and the expectations of its users.

This research also contributes to the existing literature on the Flow Theory (Csíkszentmihályi, 1975) applied in immersive virtual environments (e.g., Nah, Eschenbrenner and DeWester, 2011; Hooker *et al.*, 2019; Park, Ko and Do, 2023), and extends previous studies on branding and marketing in the same context, by showing that the sense of flow that people experience in virtual immersive environments positively influences their perceptions of brand excitement and brand authenticity. Regarding the effect of flow on brand authenticity (Flow → Brand authenticity) this research extends previous studies' findings that flow positively influences brand attitude and consumers behaviors (e.g., Hooker *et al.*, 2019), by suggesting that when people experienced flow, they tend to perceive the brand as authentic, which may lead to a positive brand attitude and behaviour toward the brand. Moreover, this research complements Nah, Eschenbrenner and DeWester (2011) study showing the perception of "being there" and the sense of joy experienced increase brand equity, by contributing with the understanding of the role of flow on consumers' perception of brand authenticity, which may influence brand equity. Panyekar and Marsasi (2024) showed that brand authenticity positively influences brand trust and customer satisfaction, enhancing brand equity. This study also updates Nah, Eschenbrenner and DeWester (2011) study conducted on Second Life in 2011 to a modern metaverse platform (Spatial.io) in 2025.

Regarding the effect of flow, the importance of this study's contributions resides mainly in proving that flow influences the perception of brand excitement (Flow → brand excitement), extending previous studies such as Wang *et al.* (2015) who suggest that high levels of flow enhance the positive perception of brand personality, which was evidenced in another virtual context (advergame). The particularity of the excitement dimension of the brand personality in relation to flow can be explained as when people experience flow, they feel joy and excitement, making consumers perceive the metaverse as exciting, influencing a positive perception of the excitement dimension of the brand personality traits, which complement De Gauquier *et al.* (2019) study evidencing the positive relationship between the perception of brand excitement and 3D virtual immersive environments.

Finally, this study makes a theoretical contribution to the understanding of brand visual consistency concept in contemporary branding literature, by empirically proving that consumers perceive the brand with a dynamic logo as visually consistent (instead of inconsistent), shedding light on the CVI consistency/CVI inconsistency discussions

(Gregersen and Johansen, 2018, 2022; Sääksjärvi *et al.*, 2015; Choi and Choi, 2016). In this regard, the results of this study contradict the traditional paradigm, while supporting the alternative paradigm that allows for some inconsistencies, suggesting that flexible or dynamic brands (using dynamic logos and visual identities) can still be perceived as visually consistent. Additionally, these findings provide support to Kelly's (2017) point of view in favour of flexible logos and visual identities, and challenging the traditional idea that companies should prefer static logos over dynamic ones to be perceived as visually consistent. Exploring the role of the logo contributed a response to her statement suggesting the lack of examination on its role. The evidence that brands with a dynamic logo can be perceived as visually consistent is a major contribution that can help to redefine the concept of brand visual consistency and empirically address consumers perceive brands with dynamic logos as visually consistent.

Consumers' perception of brand visual consistency is key for the future of branding, as today brands are facing the necessity to have flexible and adaptable visual identities, to be able to maintain consistency in every touchpoint (IRL, 2D digitally, 3D virtually) while being able to continue evolving and adapting to new technologies. This study expands on existing literature that positively links consistency and authenticity (Bruhn *et al.*, 2012; Eggers *et al.*, 2013; Gregersen and Johansen, 2022), in the specific context of the metaverse, by providing empirical evidence that brand visual consistency in the metaverse positively influences brand authenticity (Brand visual consistency → Brand authenticity), and dynamic logos are perceived as visually consistent instead of inconsistent, making it possible to argue that brands can use flexible and adaptable logos and still be perceived as consistent, thereby enhancing the perception of brand authenticity.

## 6.2. PRACTICAL CONTRIBUTIONS

This study sheds light on the need for branding practitioners to understand brand authenticity in today's world, showing that in an immersive virtual space, brand authenticity is positively perceived when it is associated with a capacity for adaptation and innovation, making a flexible and adaptable logo relevant for perceiving brand excitement, which leads to the perception of brand authenticity.

A practical piece of advice for brand managers and brand designers to successfully introduce a brand into the metaverse is to design a visual identity with a dynamic logo for the purpose of expressing an exciting personality trait, to ensure that the brand is perceived as "daring, spirited, imaginative, and up-to-date", as these are the traits used to measure the

excitement dimension in the measurement scale proposed by Aaker (1997, p. 351). However, this does not mean that all brands should have excitement as their core personality trait.

Another practical advice for designers and branding specialists looking to create successful brand experiences in immersive virtual worlds is to consider the key role of flow in consumers' brand perception, as the higher the level of flow experienced by people, the more positive their perception of the brand's excitement and authenticity in the metaverse will be. Therefore, they should create immersive virtual brand experiences that can enhance the sense of flow experienced by their users, ensuring that users have the necessary skills to navigate, interact and play in the virtual experience, which is key to experiencing flow, according to the Flow Theory (Csíkszentmihályi, 1975) and creating experiences in which individuals not need to be aware of the time and can enjoy themselves (Hooker *et al.*, 2019).

As a valuable practical contribution, brand designers can develop more flexible visual identity systems without risking brands being perceived as less visually consistent. Therefore, the empirical findings of this study in relation to dynamic brands being perceived as visually consistent are highly relevant, and provide an opportunity for brands to harness this effect when designing or redesigning their visual identities, especially in brands facing the future with the willingness to adapt to new trends and market scenarios, including technological advances such as VR, AR, AI that make flexibility and adaptation a necessity instead of a choice.

After analysing this study's findings and its theoretical and practical contributions, it is possible to reasonably argue that as in today's fast-changing world emerging technologies are opening new frontiers for brands, which implies a diversity of environments (IRL, digital in 2D, virtual in 3D), audiences, and novel ways to interact and engage with them. As the evolution of the market for brands does not stop, it is imperative to advise brands to place a focus not just on being agile and quick in responding to new market demands and trends, but instead on their ability to adapt and evolve. Therefore, for brands facing the irruption of technology (e.g., AI, AR, VR) creating highly interactive, immersive and dynamic market scenarios, it would be advisable to stop using their static and rigid visual identity manuals, simply because they lack flexibility and adaptability. Instead, the main advice for brands is to create dynamic visual identity systems capable of adapting to this and future market scenarios driven by emerging technologies and new generations, without risking visual

consistency while enhancing the perception of brand excitement, which leads to a brand being perceived as an authentic brand.

### 6.3. LIMITATIONS AND FUTURE RESEARCH

This study conducted an experiment in the metaverse to assess consumers' brand perceptions. There are some limitations that will be presented in the following paragraphs, along with related suggestions for future research to consider when further exploring and analysing this area of study.

Regarding the metaverse platform selected for this study, the experiment was conducted solely on a single metaverse platform (Spatial.io), which is a contemporary metaverse platform at the time of this study (2025) used by major brands (e.g., Hugo Boss, Tommy Hilfiger, Walmart, Absolut Vodka, among others), and was limited to people residing in the UK; therefore, there is an opportunity to do similar research on other metaverse platforms and populations.

Most participants in this study had limited previous experience in the metaverse, ( $M = 3.97$  out of 7, just below the neutral point of 4). Therefore, future research may conduct experimental studies with participants who are very familiar with the metaverse to further investigate its effect on brand perceptions. This is recommended because the results of this study suggest that people familiar with the metaverse perceive brands as more authentic. This is consistent with the idea of this study that brands must “fit in” the metaverse to be perceived as authentic, understanding that it is plausible that people familiar with the metaverse can more easily recognise and determine the brand that aligns with the metaverse and its collective expectations.

This study employed a 90% confidence interval to assess simple mediation and  $t$ -test. As exploratory research in a novel area of studies, this decision helps to identify potential tendencies in effects, although it may reduce the certainty of the findings compared to the conventional 95%CI.

In the experiment, participants were provided with a random avatar. In real life, people can often personalise their avatars. Therefore, ideally, participants should be able to create their own avatars in the metaverse platform, even wearing branded clothing when provided, allowing for self-expression and self-identification, as it could have a positive effect on brand perceptions (Beverland and Cankurtaran, 2024). Thus, consumers' using their own avatars

could positively impact brand authenticity. To further investigate this, future research should recruit participants who already have an account on the metaverse platform selected for the experiment.

The time limit was the major limitation of this study. Participants were recruited in Prolific; therefore, due to the financial constraints, they were asked to explore the metaverse brand space for no longer than five minutes, which could limit the levels of flow. According to the results of this study, flow positively influences the perception of brand authenticity and brand excitement; thus, if participants experienced higher levels of flow, it would impact the results, potentially enhancing them. The not-too-high level of flow experienced by participants was evident in their survey responses related to flow, rating  $M=4.5$  (7-point Likert scale). Future research could replicate this study without a time limit to allow participants to experience higher levels of flow, reached when they experience full immersion, losing track of time. In this study, this was not fully reached, due to the participants' awareness of time because of the time limit imposed in the study.

A fully immersive VR experience can be seen as another limitation of this research, because participants were not required to use a VR headset. The decision not to require the use of VR headset was made to avoid or mitigate any health issues such as dizziness, headaches, or injuries from disorientation or losing balance; also, because nowadays most people enter the metaverse without a VR headset (Hennig-Thurau, Herting and Jütte, 2025), which is the reason why this study aims to understand consumers brand perception in the contemporary context. However, as people using VR headsets reach a higher level of immersion, future studies may require VR headsets to look for a more immersive experience, which can potentially influence the effect of the experienced flow on brand perceptions.

Regarding the use of a new logo in this study (a fictitious brand just created for the purpose of this study), future research could consider using an existent brand to extend this study's findings. Such a brand would come with established perceptions and research can find out whether those are changed by dynamic logos in the metaverse. This can shed light on the importance of the logo's lifespan on brand authenticity perception. According to Haviv (2017), the logo needs time to be associated with certain brand perceptions and attitudes. However, it is necessary to clarify that brand authenticity is the perception of the brand, not the logo, which is a visual element to visually identify the brand. That clarification between brand and logo helps to understand Guèvremont (2018) study findings, suggesting new brands can be perceived as authentic. This research demonstrated that, in fact, a brand with a new logo can be perceived as authentic in the metaverse, highlighting a very relevant

contribution that suggests this is due to the perception of brand excitement, which positively influences the perception of authenticity, rather than the authenticity of the brand perceived directly through its logo. Therefore, the new logo not showing a direct influence on brand authenticity supports Haviv (2017), while Guèvremont (2018) was supported as well by its indirect effect. Future research can therefore assess brand authenticity in the metaverse using existent and well-known brands, to extend this study findings, specifically in relation to the direct/indirect effect of the logo on brand authenticity.



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