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The Impact of Animated Mascot Displays on Consumer Evaluations in E-Commerce

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Abstract: This study investigates consumer reactions to mascots on e-commerce websites, focusing on how anthropomorphic visual cues influence website satisfaction, revisit intention, and purchase intention. Specifically, we examine how mascot movement affects consumers' sense of social presence and engagement, as well as the role of team identification in these effects. A 3 (mascot type: none, static, animated) × 2 (team identification: high, low) between-subjects experiment was conducted with 203 participants recruited from Amazon Mechanical Turk. Our findings show that the presence of mascots significantly impacts consumer evaluations, with social presence and engagement acting as sequential mediators. Notably, high team identification moderates the effect of animated mascots on revisit and purchase intentions but does not affect website satisfaction. These results provide valuable theoretical and practical insights for marketing, highlighting the importance of mascot design and movement in enhancing e-commerce experiences.

Keywords: mascot; social presence; engagement; satisfaction; revisit intention; purchase intention; team identification

1. Introduction

Team merchandising is a key marketing strategy that actively uses humanized mascots to positively influence fans. Mascots are central to team identity, symbolizing the essence of the team (Schultz & Sheffer, 2018). They are employed in various marketing strategies to build positive relationships with existing fans and attract new ones. A key mechanism behind the positive effects of mascot usage is anthropomorphism (Ko et al., 2022). Sports teams achieve this humanization by endowing non-human mascots (e.g., animals) with human-like appearances and personalities, thereby increasing their appeal and relatability to fans (Lewis, 2001). This strategy fosters stronger emotional connections between fans and mascots that resemble or behave like humans (Connell, 2013). For example, the Chicago Bulls' mascot, Benny, is designed to resemble a bull, while the Milwaukee Bucks' mascot, Bango, looks like a deer.

Within sport management, the study of team mascots is an emerging area of research. Existing studies have explored various dimensions of mascot usage, including their role in delivering marketing messages (Ko et al., 2022) and in attracting young consumers to new teams (Reifurth et al., 2020). Additionally, researchers have examined the sociological implications of mascots—such as issues of racial hegemony (Callais, 2010)—and investigated the correlation between mascot loyalty and fan identification (Schultz & Sheffer, 2018). For instance, Ko et al. (2022) studied how the humanization of mascots and the use of specific color schemes in promotional materials influence fans' psychological closeness to teams and, in turn, their media consumption. Furthermore, Schultz and Sheffer (2018) analyzed the relationship between mascot loyalty, fan identification, and demographic variables.

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Despite existing research, our understanding of mascots' potential impact in attracting both current and prospective fans remains limited. Most studies on sports mascots have focused on their role in fostering fan identification (Schultz & Sheffer, 2018) and generating positive fan responses through marketing appearances (Ko et al., 2022). However, a promising avenue for further investigation involves examining how mascots' physical movements and personalities shape fan perceptions of both the mascots themselves and the teams they represent. If fans perceive humanized mascots as human-like entities, it becomes essential to explore the influence of physical movement and personality—fundamental elements of human interaction. Building on this premise, the present study emphasizes the importance of physical movement as a powerful marketing tool for evoking positive fan reactions. This claim is supported by extensive research in marketing and communication, which highlights the substantial impact of movement on human perception and response. For example, Cian et al. (2014) demonstrated that logos perceived as more dynamic—conveying a greater sense of movement—lead to more favorable brand evaluations compared to static designs. Similarly, Grigsby et al. (2022) found that advertisements depicting higher levels of motion increase narrative transportation and generate more positive audience attitudes than those with limited movement.

Moreover, among the various components of advertising, motion is widely recognized as a fundamental feature of animated banner ads (Li et al., 2016). This is largely because animated banner ads are composed of a sequence of static images arranged to create the illusion of movement (Kalyanaraman & Oliver, 2001). Research on the impact of motion further suggests that humans have an innate tendency to attend to moving objects (Schulz et al., 2001). Specifically, when individuals encounter moving images, they are more likely to focus their attention on the source of the motion and process the accompanying information more effectively. By examining these interconnected dynamics, the present study seeks to contribute to the literature by investigating how animated mascots can enhance perceived social presence and, in turn, influence fan engagement.

This study integrates literature on anthropomorphism and motion to examine how mascot movement influences fan responses to marketing messages. While previous research (e.g., Cian et al., 2014) has identified a generally positive relationship between movement and fan engagement, we propose a more nuanced framework. Specifically, we hypothesize that the impact of mascot movement on fan responses is moderated by the level of team identification. We predict that, for highly identified fans, high levels of mascot movement during the delivery of marketing messages will foster stronger engagement and emotional connection with the mascot, thereby enhancing message processing and evaluation. In contrast, for fans with lower levels of team identification, excessive mascot movement may be counterproductive, serving as a distraction that impairs message comprehension. This negative effect is expected to arise from a weaker emotional bond with the team, which makes these fans more susceptible to being distracted by peripheral cues such as movement. Overall, this study has two primary objectives. First, it investigates whether incorporating movement into mascot presentations leads to positive or negative evaluations of team messages and associated behavioral intentions. Second, it explores whether the effect of mascot movement on fans' message evaluations and behavioral intentions is moderated by the strength of their team identification.

2. Theoretical Background

2.1. Anthropormorphism Theory and Mascots

A key marketing strategy in mascot development is anthropomorphism, defined as "the tendency to attribute human-like characteristics, actions, and intentions to inanimate objects" (S. Kim & McGill, 2011, p. 95). Anthropomorphism entails the depiction of an

agent's mental attributes (e.g., emotions, intentions) or physical features (e.g., arms, legs) using human-related descriptors. This perception of non-human entities as human-like enhances consumer attitudes toward brands, leading to more favorable evaluations of anthropomorphized products and businesses (S. Kim & McGill, 2011). In the context of sports, teams frequently leverage anthropomorphism by endowing mascots with human-like features to increase relatability and approachability, thereby fostering stronger emotional connections with fans (Ko et al., 2022). This humanization typically includes assigning mascots names, unique appearances, and engaging personalities to help them stand out from competitors and create a more memorable brand image (Aggarwal & McGill, 2007). Humanizing mascots plays a critical role in sports marketing, serving as a key emotional touchpoint that resonates with both current and potential fans (Callais, 2010; Davou et al., 2008). Indeed, the visual and behavioral appeal of a team's mascot can significantly influence fan loyalty (Ramish et al., 2023). Humanized mascots act as symbolic extensions of the teams they represent, helping to cultivate a sense of collective identity among fans (Callais, 2010; Lewis, 2001). As such, well-crafted mascots can strengthen team identity, enhance customer loyalty, and provide a distinct competitive advantage in the marketplace (Dalakas & Rose, 2013).

2.2. The Effects of Humanized Mascots

The extant research, grounded in anthropomorphism theory, consistently demonstrates a positive relationship between the humanization of non-human entities and consumer responses across various domains. Numerous studies have shown that consumers respond more favorably to anthropomorphized brands and products, resulting in enhanced perceptions of social presence (Bente et al., 2008), increased satisfaction (Hennig-Thurau et al., 2002), stronger revisit intentions (T. Ying et al., 2022), and heightened purchase intentions (Han, 2021). These effects are primarily attributed to anthropomorphism's ability to foster more intimate and engaging user–brand interactions, thereby influencing consumer decision-making processes (Aggarwal & McGill, 2012; Tam et al., 2013). Sandoval et al. (2022) further emphasize the role of anthropomorphic features in enhancing the likability of human–robot interactions by facilitating social and emotional bonding. This aligns with earlier findings by Nass et al. (1995), who noted that individuals tend to apply social heuristics when engaging with non-human entities that exhibit human-like or socially relevant cues. Such responses often lead to greater empathy and more positive attitudes (De Melo et al., 2014). The resulting increase in consumer preference and product selection driven by anthropomorphism has also been supported by studies indicating that humanized products are perceived as more attractive and aesthetically pleasing (Huang et al., 2020). This effect extends to digital environments, where anthropomorphic virtual characters enhance user enjoyment and perceived social presence, ultimately increasing purchase likelihood (Han, 2021). Similarly, in e-commerce contexts, anthropomorphized sales agents have been shown to heighten perceived enjoyment and social presence, leading to stronger purchase intentions (Aggarwal & McGill, 2012; Jin, 2010). Additionally, anthropomorphic online messengers have been found to improve advertising effectiveness, sometimes even outperforming human representatives in terms of appeal (Choi et al., 2001; Touré-Tillery & McGill, 2015). Experimental research by Hart and Royne (2017) confirmed that anthropomorphic appeals positively influence brand attitudes and purchase intentions. This effect has also been demonstrated in the hospitality industry, where hotel advertising strategies incorporating anthropomorphism-based communication resulted in more favorable consumer responses (Lee & Oh, 2021). By incorporating insights from anthropomorphism and movement literature, this study proposes that mascot movement within marketing messages plays a critical role in shaping fan responses. Intuitively, and in

line with previous research (e.g., Cian et al., 2014), one might expect mascot movement to elicit positive reactions from fans by increasing engagement. However, this study suggests that the effect of mascot movement may be either positive or negative, depending on the level of fans' team identification. Specifically, mascot movement may enhance engagement with marketing messages among highly identified fans, while it may distract those with lower levels of identification. Highly identified fans tend to be more emotionally connected to their teams than less identified fans (Funk & James, 2001). As a result, incorporating mascot movement into marketing content may further engage these emotionally invested fans. In contrast, for fans lacking such emotional ties, the same movement may serve as a distraction, reducing their ability to process the marketing message effectively.

However, the relationship between movement and positive consumer responses is not universally linear. While often overlooked, research suggests that excessive movement may negatively affect consumer attention and purchase intentions (L. Ying et al., 2009). Specifically, an overabundance of movement can be perceived as intrusive, leading to negative evaluations of the browsing experience (Lin & Kim, 2016). For example, Chen and Zhu's (2022) experimental study comparing static and animated promotional displays found that, although consumers allocated cognitive resources to processing animated elements, those with high product involvement experienced more complex decision-making processes, ultimately resulting in reduced purchase intent. Based on this evidence, the present study anticipates that animated mascots—depending on the level of movement—may elicit both positive and negative consumer responses on sports team websites.

2.3. Social Presence and Engagement as a Key Underlying Mechanism

Social presence is a key mechanism underlying the positive effects of humanized products (Y. Yoo & Alavi, 2001). It is defined as "the degree to which a medium enables individuals to perceive others as being psychologically present" (Short et al., 1976, p. 65). Individuals are more likely to experience a sense of social presence when interacting with humanized technologies (Y. Kim & Sundar, 2012). Specifically, incorporating human-like characteristics into non-human entities encourages consumers to perceive them as more human, thereby enhancing social presence and ultimately leading to positive behavioral outcomes (Sundar, 2008). Empirical evidence supports this effect. For example, consumers who interact with anthropomorphized agents report a stronger sense of social presence (Qiu & Benbasat, 2009). Similarly, Broadbent et al. (2013) found that robots with human-like features were perceived as more human-like and that humanized chatbots were rated as more intelligent, alive, sociable, and friendly than their non-humanized counterparts.

The benefits of humanization extend to online environments, including e-commerce platforms and chatbot interactions. Bente et al. (2008) demonstrated that anthropomorphic features in avatars designed to mimic human behavior enhance social presence, which in turn increases website satisfaction, revisit intentions, and purchase intentions. Furthermore, integrating human-like characteristics into chatbots has been shown to improve communication quality, elevate user satisfaction with chatbot services, and ultimately boost users' intentions to return to online platforms (Chung et al., 2020; Uysal et al., 2022). This positive effect is largely attributed to the formation of stronger parasocial relationships between users and humanized chatbots, driven by heightened social presence, which motivates website revisits and purchase behaviors (Ye et al., 2020).

Social presence is recognized as a key antecedent of consumer engagement, which Brodie et al. (2011) define as the psychological connection between consumers and service providers. Kietzmann et al. (2012) identified a positive relationship between social presence and engagement, and Kruikemeier et al. (2013) further demonstrated that social presence facilitates consumer interaction and engagement. Similarly, Fortin and Dholakia (2005)

reported a significant positive correlation between social presence and consumer engagement. Therefore, sufficient levels of social presence elicit meaningful affective, cognitive, and behavioral responses from consumers (Gefen & Straub, 2004). As a result, consumers who experience social presence in their interactions with humanized chatbots are expected to exhibit higher levels of engagement.

Consumer engagement is a dynamic process that involves active participation and the development of long-term relationships between consumers and brands (Sashi, 2012). The degree of consumer engagement on a website significantly impacts brand success and consumer loyalty (So et al., 2014). Previous research has demonstrated that consumer engagement fosters stronger relationships and emotional attachment to chatbots (Tsai et al., 2021). As a result, satisfaction and revisit intentions are widely recognized as key outcomes of consumer engagement (McLean & Wilson, 2019; Hollebeek et al., 2014). Additionally, purchase intention is frequently identified as a direct consequence of strong consumer engagement with a brand (Verma, 2021). Based on the existing literature, this study proposes that the display of mascot on a team's website and within the selling team's merchandising products will enhance consumers' website satisfaction, revisit intention, and purchase intention via enhanced social presence. Thus, we propose the following hypotheses:

H1. *The display of mascot on the team's website in selling team merchandising products will enhance consumers' (a) website satisfaction, (b) revisit intention, and (c) purchase intention of merchandise product.*

H2. *The positive effects of mascot display on consumers' evaluations of (a) website satisfaction, (b) revisit intention, and (c) purchase intention of merchandise product will be sequentially mediated by the sense of social presence and engagement.*

2.4. Movement in Mascot

While sports mascots are widely used, research on the effects of anthropomorphism on fan responses remains limited. Although some initial studies have begun to examine how anthropomorphizing mascots may influence fan reactions (Ko et al., 2022), a comprehensive understanding of how specific anthropomorphic features shape fan attitudes and behaviors is still underdeveloped. However, related research has established a growing body of evidence showing that humanized product features—such as emotional expressions (Song et al., 2023), physical gestures (Salem et al., 2013), and eye contact (Kompatsiari et al., 2019)—significantly influence consumer perceptions and behaviors. This body of work consistently demonstrates that consumers perceive robots exhibiting eye contact, hand gestures, and verbal communication as more human-like compared to those lacking these characteristics (Kompatsiari et al., 2019; Zhang et al., 2010).

One key anthropomorphic feature that may influence fan evaluations of mascots is physical movement. Physical attributes often serve as cues for inferring human-like capabilities and are considered critical indicators of anthropomorphism (Morewedge et al., 2007; Connell, 2013). Human-like movement embedded in anthropomorphized objects typically elicits more favorable evaluations. While existing sport management literature has largely overlooked the role of physical movement in mascot marketing, related fields such as marketing and advertising have begun to explore its potential impact—particularly in the context of humanized logos. For instance, Cian et al. (2014) found that static logos incorporating elements of movement—creating the illusion of dynamism—positively affect brand evaluations by enhancing consumer engagement. This effect is attributed to the deeper level of information processing triggered by imagining or simulating movement, which increases both engagement and attention (Brasel & Hagtvedt, 2016; Cian et al., 2014).

Also, Min et al. (2025) determined that consumers spent a longer duration on animated advertisements in the e-sport game context.

The benefits of movement extend to website design, where animated elements effectively capture user attention and encourage longer browsing durations (Cheung et al., 2017; Hong et al., 2007). In particular, dynamic logos convey a more engaging brand personality than their static counterparts (Brasel & Hagtvedt, 2016), and research has shown that animated website features maintain consumer interest more effectively than static ones (Hong et al., 2004). As a result, incorporating animated marketing elements into online product pages can enhance consumer engagement.

2.5. Mascot Movement and Team Identification

Team identification, grounded in social identity theory, reflects the extent to which individuals develop emotional and psychological bonds with a specific sports team, perceiving the team's successes and failures as personally meaningful (D. L. Wann, 2006). According to social identity theory, individuals tend to align themselves with groups they perceive as important, and such group affiliation plays a fundamental role in the formation of social identity (Turner & Oakes, 1986). In this context, team identification encompasses an individual's sense of group membership, self-concept, and their perceived value and significance of engagement with the team (Stieler & Germelmann, 2016; Tajfel, 1978). This identification is often expressed through behaviors such as wearing team apparel, which symbolizes loyalty and affiliation (Heere & James, 2007). Moreover, fans with a high level of team identification demonstrate greater behavioral engagement than those with lower identification. They are more likely to attend games, spend more on team merchandise, and purchase more tickets (D. Wann et al., 2004). The sport management literature consistently shows that highly identified fans display more favorable attitudes and behaviors toward their teams, highlighting the central role of team identification in fostering fan loyalty and sustained engagement.

A key element in this dynamic is the mascot's symbolic function as a unifying figure that represents the broader fan community, thereby reinforcing group identification (Burke, 1984). Mascots serve as powerful emblems of team identity, encapsulating the essence of the team and deepening the emotional bond between fans and the organization (Y. M. Kim & Kim, 2009; Branscombe et al., 1993). As a result, highly identified fans tend to form stronger emotional connections with their team's mascot, leading to more favorable responses to team initiatives involving the mascot than fans with lower identification levels (D. L. Wann et al., 2015). Thus, mascots not only enhance the overall fan experience but also play a vital role in strengthening the relationship between sports teams and their supporters.

This study hypothesizes that team identification moderates the effect of mascot movement on fans' evaluations of team e-commerce websites and their intention to purchase merchandise. Specifically, we predict that highly identified fans will respond more favorably to e-commerce websites featuring animated mascots compared to those with static or no mascots. Conversely, we expect that animated mascots will negatively influence evaluations among fans with low levels of team identification. This hypothesis is supported by marketing research indicating that animated agents in advertisements strengthen emotional connections when consumers strongly identify with the brand (Delbaere et al., 2011), and that animated content enhances viewer attention, thereby improving information encoding and retrieval (Praveen & Srinivasan, 2022). As such, highly identified fans are expected to react more positively to animated mascots due to their stronger emotional connection with the team.

In contrast, for less identified fans, the dynamic nature of animated mascots may serve as a distraction, hindering their overall shopping experience. Prior studies have

shown that excessive motion can impair memory retention and elicit negative emotional responses such as irritation and annoyance (D. L. Lee & Ahn, 2012; Bailey & Konstan, 2006; Gao et al., 2004; Goldstein et al., 2014), particularly when animation is perceived as disruptive (Goldstein et al., 2014). This finding is consistent with research demonstrating a negative association between low team identification and favorable attitudes toward mascots and related merchandise (Gwinner & Swanson, 2003). Specifically, animated mascots can attract consumers' attention better than static mascots (Hong et al., 2004). Therefore, consumers with low identification will prefer a static mascot than an animated mascot. By incorporating existing literature, we suggest the following hypotheses:

H3. *Sports consumers with high identification will show greater (a) website satisfaction, (b) revisit intention, and (c) purchase intention of merchandise product when an animated mascot is displayed on the product page of website compared to a static mascot.*

H4. *Sports consumers with low identification will show greater (a) website satisfaction, (b) revisit intention, and (c) purchase intention of merchandise product when a static mascot is displayed on the product page of website compared to an animated mascot.*

A research model was developed based on the hypotheses (Figure 1).

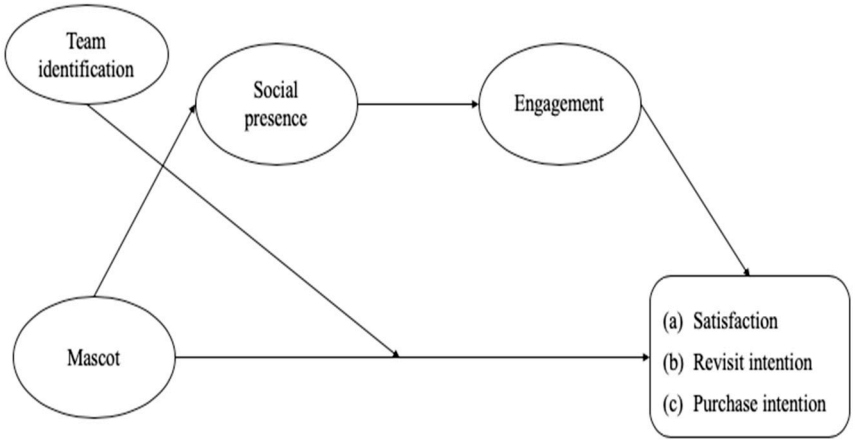

Figure 1. Research model.

3. Methods

3.1. Participants and Design

This study utilized a 3 (Different types of mascot on team e-commerce website: no mascot vs. static mascot vs. animated mascot) × 2 (Level of team identification: high vs. low) experimental design. Different types of mascot were manipulated while level of team identification was measured. No mascot condition was included as a control condition. Participants were randomly exposed to the e-commerce website for a duration of two minutes. They were recruited through Prolific, a professional online survey platform, using random sampling. Of the 210 individuals who completed the survey, 203 responses were retained after excluding unreliable entries, resulting in a high-quality, nationally representative sample suitable for experimental research (Kees et al., 2017). Detailed demographic information is presented in Table 1.

Table 1. Demographic information.

Variable	Group	*n*	%
Gender	Male	78	38.4%
	Female	125	61.6%
Education Level	Highschool or GED	27	13.3%
	Some college	50	24.6%
	Bachelor's degree	90	44.3%
	Graduate degree	34	16.7%
	Others	2	1.0%
Ethnicity	African-American	21	10.3%
	Asian	40	19.7%
	Caucasian	112	55.2%
	Hispanic	23	11.3%
	Others	7	3.4%
Household Income	USD 9999 or less	13	6.4%
	USD 10,000~USD 39,999	40	19.7%
	USD 40,000~USD 69,999	59	29.1%
	USD 70,000~USD 119,999	50	24.6%
	USD 120,000~USD 199,999	26	12.8%
	USD 200,000 or higher	15	7.4%
Total		203	100%

3.2. Manipulation of Different Types of Mascot on Team E-Commerce Website

Houston Rockets' mascot "Clutch" was used as an anthropomorphic animal (Figure 2). A Rockets jersey, along with its price, was displayed as the background of the online shopping website across all three experimental conditions. The mascot was positioned within this background alongside the phrase, "Don't miss the opportunity to be part of the Red Nation!" In the animated condition, the mascot moved its hands and body to simulate lifelike gestures.

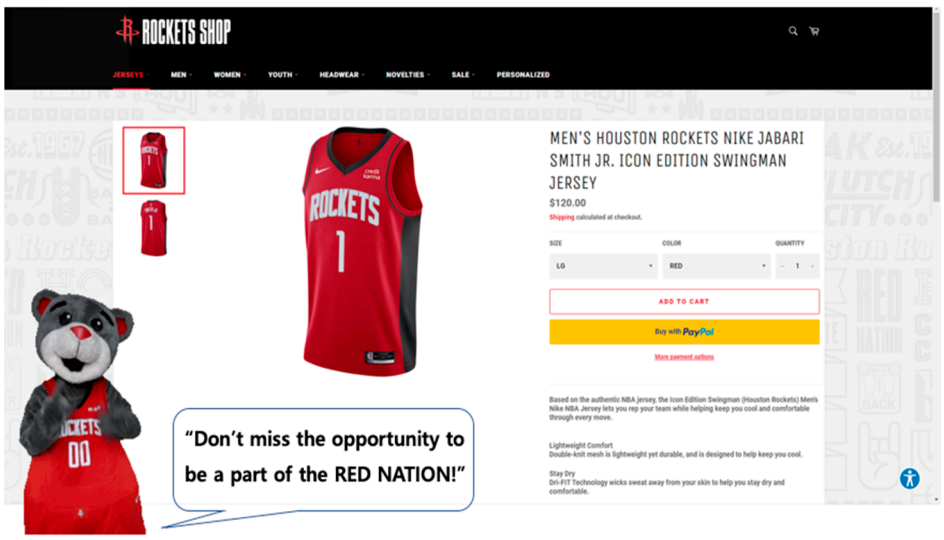

Figure 2. Mascot on Team E-commerce Website.

3.3. Procedure

First, participants visited a fictitious Houston Rockets official website created specifically for this study. They were randomly assigned to one of three experimental conditions. In the no mascot condition, participants viewed a website displaying only Jabari Smith's

jersey, its price, and a purchase button. In the static mascot condition, the website included a non-moving mascot image alongside the jersey, price, and purchase button. In the animated mascot condition, the website featured an animated mascot (presented as a GIF file) along with the jersey, price, and purchase button. Aside from the varying levels of mascot movement, all other website elements remained identical across conditions. Next, participants were instructed to imagine themselves visiting the website to purchase Jabari Smith's jersey. Afterward, they completed a questionnaire that included measures of social presence, mascot engagement, website satisfaction, revisit intention, purchase intention for Jabari Smith's jersey, and team identification.

3.4. Measures

All variables were measured on a seven-point scales. King and He (2006) and Bruwer et al. (2008) were adopted to measure social presence. User engagement scale was adopted from O'Brien et al. (2018). Website satisfaction was adopted from Joosten et al. (2016). Revisit intention was endorsed by Bhattacherjee (2001). We also measured purchase intention with Putrevu and Lord's (1994) items. Finally, Branscombe et al. (1993) was used to measure team identification.

Discriminant validity was evaluated through Pearson correlation analysis. The findings showed that each Average Variance Extracted (AVE) value surpassed the correlations with other constructs, thereby supporting the sufficiency of discriminant validity for each factor (refer to Table 2).

Table 2. Correlations between constructs and AVE values.

	1	2	3	4	5	6
1 social presence	**0.762**					
2 engagement	0.562 **	**0.816**				
3 satisfaction	0.512 **	0.418 **	**0.794**			
4 revisit intention	0.440 **	0.340 **	0.549 **	**0.888**		
5 purchas intention	0.487 **	0.347 **	0.429 **	0.789 **	**0.871**	
6 team idenfication	0.339 **	0.249 **	0.298 **	0.455 **	0.485 **	**0.819**

Note: bold = AVE values; ** = $p < 0.01$.

3.5. Data Analysis

Prior to testing the research hypotheses, descriptive statistics were examined to assess the characteristics of the participants and to detect potential outliers. Subsequently, a confirmatory factor analysis (CFA) was performed to evaluate the validity and reliability of the measurement model utilizing Mplus 8. Furthermore, to assess the direct mediational roles of social presence and engagement on (a) website satisfaction, (b) revisit intention, and (c) purchase intention, PROCESS Models 6 was performed (Hayes, 2018). Furthermore, we used the Hayes PROCESS Model 1 for H3 and H4 to test the moderate effect of team identification. The results indicated that the mean score of team identification for the less identified group (−1 standard deviation below the mean) was 1.00, while it was 3.33 for the highly identified group (+1 standard deviation above the mean). In particular, X1 refers to static mascot display condition, whereas X2 refers to animated mascot display condition.

4. Results

4.1. Measurement Model Validation

Initially, a confirmatory factor analysis was conducted to assess the validity and reliability of the measurement model, utilizing various fit indices recommended by Hair et al. (2006). The results demonstrated an adequate fit between the measurement model and the data (χ^2/df = 281.434/120 = 2.34, CFI = 0.96, TLI = 0.95, RMSEA = 0.08, SRMR = 0.03).

All factor loadings for the measurement items were statistically significant and exceeded 0.70 (see Table 3). The average variance extracted (AVE) values ranged from 0.76 for social presence to 0.88 for revisit intention, while the composite reliability (CR) coefficients varied from 0.91 for social presence to 0.96 for revisit intention. These findings confirmed both the convergent validity and reliability of the measurement model (Fornell & Larcker, 1981). In conclusion, the results provided adequate support for the construct validity and reliability of the measurement model.

Table 3. Summary of results for confirmatory factor analysis (CFA).

Factors and Items	β	CR
Social presence		0.91
I felt a sense of human contact with this mascot	0.90	
I felt a sence of sociability with this mascot	0.87	
When I saw this mascot, I felt there were a person who was a real source of comfort to me	0.87	
Engagement		0.93
What was your perception of the mascot while you were looking at the website?		
Involving	0.89	
Engagning	0.97	
Stimulating	0.85	
Satisfaction		0.92
Please indicate whether you are satisfied with the website		
Dissatisfied to satisfied	0.83	
Frustrated to contendted	0.90	
Annoyed to pleased	0.95	
Revisit intention		0.96
How likely are you to use this website in the future?		
Unlikely to likely	0.95	
Improbable to probable	0.97	
Impossible to possible	0.90	
Purchase intention		0.95
How likely are you to purchse this jersey?		
Unlikely to likely	0.95	
Imporbable to porbable	0.97	
Impossible to possible	0.87	
Team identification		0.93
I consider myself to be a "real" fan of the Houston Rockets	0.81	
I would experience a loss if I had to stop being a fan of the Houston Rockets	0.92	
Being a fan of the Houston Rockets is very important to me	0.97	

Note: CR = composite reliability.

4.2. Manipulation of Mascot Display

In line with the analysis of variance results, participants randomized to the animated mascot display condition (M = 3.44, SD = 1.51) perceived that animated mascot had more influence on determining social presence than those provided in static mascot condition (M = 2.69, SD = 1.23) and no mascot condition (M = 3.38, SD = 1.62), $F(2, 211) = 5.64$, $p < 0.05$.

4.3. Testing H1 and H2

To conduct the simple linear regression analysis, the main effects of mascot display on website satisfaction ($b = -0.16$, $t = -1.63$, $p = 0.11$), revisit intention ($b = -0.07$, $t = -0.79$,

$p = 0.43$), and purchase intention ($b = 0.08$, $t = 0.76$, $p = 0.45$) were not supported. Therefore, H1 was rejected. H2 suggested that social presence and engagement serially mediate the effect of mascot display on (a) website satisfaction, (b) revisit intention, and (c) purchase intention. The serial mediation analysis indicated that mascot display was positively related to social presence ($b = 0.69$, $t = 2.81$, 95% CI = 0.21, 1.19), social presence was positively associated with engagement ($b = 0.63$, $t = 16.52$, 95% CI = 0.56, 0.72), and engagement was positively linked to (a) website satisfaction ($b = 0.47$, $t = 5.20$, 95% CI = 0.29, 0.65), (b) revisit intention ($b = 0.29$, $t = 3.34$, 95% CI = 0.11, 0.46), and (c) purchase intention ($b = 0.33$, $t = 3.36$, 95% CI = 0.13, 0.53), serially. In other word, the indirect effect of mascot display on (a) website satisfaction ($b = -0.21$, Boot SE = 0.08, 95%Boot CI = −0.41, −0.05), (b) revisit intention ($b = -0.12$, Boot SE = 0.06, 95%Boot CI = −0.28, −0.02), and (c) purchase intention ($b = -0.15$, Boot SE = 0.07, 95%Boot CI = −0.33, −0.02) through social presence and engagement was statistically significant. Specifically, consumers who saw a displayed mascot rather than no mascot perceived a higher social presence, thereby causing them to feel a higher engagement, which in turn yielded a higher (a) website satisfaction, (b) revisit intention, and (c) purchase intention. Therefore, H2 was supported.

4.4. Testing H3 and H4

The Regarding website satisfaction, the main effects of X2 ($b = -0.53$, $t = 2.17$, $p = 0.19$) and team identification ($b = 0.11$, $t = 0.77$, $p = 0.45$) and interaction between team identification and X2 ($b = 0.27$, $t = 1.46$, $p = 0.15$) were not significant. Meanwhile, the main effects of X1 ($b = -0.12$, $t = -0.28$, $p = 0.78$) and interaction between X1 and team identification ($b = 0.26$, $t = 1.40$, $p = 0.16$) were not significant. In addition, the results of the simple slope analysis indicated that sport consumers with high team identification indicated greater levels of website satisfaction under the static mascot condition (M = 4.84; $b = 0.75$, $t = 2.14$, $p > 0.05$) compared to the animated mascot condition (M = 5.22; $b = 0.38$, $t = 1.05$, $p = 0.29$). In contrast, for sport consumers with low team identification, neither the static mascot condition (M = 4.58; $b = 0.14$, $t = 0.52$, $p = 0.61$) nor the animated mascot condition (M = 4.32; $b = -0.26$, $t = -0.96$, $p = 0.34$) had a significant effect on website satisfaction. Therefore, Hypotheses 3(a) and 4(a) were rejected (Table 4).

Regarding revisit intention, the main effects of X2 ($b = -0.60$, $t = -1.71$, $p = 0.08$) and team identification ($b = 0.42$, $t = 0.12$, $p > 0.05$), and interaction between team identification and X2 ($b = 0.38$, $t = 2.31$, $p > 0.05$) were significant. Meanwhile, the main effects of X1 ($b = -0.08$, $t = -0.21$, $p = 0.83$) and interaction between X1 and team identification ($b = 0.22$, $t = 1.41$, $p = 0.16$) were not statistically significant. However, the results of the simple slope analysis revealed that sport consumers with high team identification reported significantly greater revisit intention in both the static mascot condition (M = 3.40; $b = 0.67$, $t = 2.23$, $p > 0.05$) and the animated mascot condition (M = 4.05; $b = 0.65$, $t = 2.08$, $p > 0.05$). In contrast, revisit intention was not significantly affected for consumers with low team identification in either the static mascot condition (M = 2.43; $b = 0.15$, $t = 0.62$, $p = 0.53$) or the animated mascot condition (M = 2.20; $b = -0.23$, $t = -0.97$, $p = 0.33$). Therefore, hypothesis 3(b) was supported, while hypothesis 4(b) was rejected.

Regarding purchase intention, the main effects of X2 ($b = -0.19$, $t = -0.47$, $p = 0.64$) and team identification ($b = 0.46$, $t = 3.21$, $p > 0.05$) and interaction between team identification and X2 ($b = 0.33$, $t = 1.74$, $p = 0.08$) were not statistically significant. Also, the main effects of X1 ($b = 0.23$, $t = 0.56$, $p = 0.58$) and interaction between X1 and team identification ($b = 0.17$, $t = 0.95$, $p = 0.34$) were not significant. In addition, the results of the simple slope analysis indicated that sport consumers with high team identification indicated greater levels of revisit intention under both static mascot conditions (M = 3.51; $b = 0.81$, $t = 2.34$, $p > 0.05$) and an animated mascot conditions (M = 4.40; $b = 0.89$, $t = 2.49$, $p > 0.05$). In

contrast, purchase intention among sport consumers with low team identification was not significantly affected in either the static mascot condition (M = 2.44; $b = 0.41$, $t = 1.47$, $p = 0.14$) or the animated mascot condition (M = 2.58; $b = 0.13$, $t = 0.49$, $p = 0.63$). Therefore, hypothesis 3(c) was supported, while hypothesis 4(c) was rejected.

Table 4. Summary of hypothesis testing results.

	Relationship	Results
H1	(a) display of mascot → website satisfaction	Reject
	(b) display of mascot → revisit intention	Reject
	(c) display of mascot → purchase intention	Reject
H2	(a) social presence and engaement play a serial mediating role in the relationship between mascot and website satisfaction	Accept
	(b) social presence and engaement play a serial mediating role in the relationship between mascot and revisit intention	Accept
	(c) social presence and engaement play a serial mediating role in the relationship between mascot and purchase intention	Accept
H3	(a) the moderating role of high team identifiaction in the relationship between animated mascot and website satisfaction	Reject
	(b) the moderating role of high team identifiaction in the relationship between animated mascot and revisit intention	Accept
	(c) the moderating role of high team identifiaction in the relationship between animated mascot and purchase intention	Accept
H4	(a) the moderating role of low team identifiaction in the relationship between static mascot andwebsite satisfaction	Reject
	(b) the moderating role of low team identifiaction in the relationship between static mascot and revisit intention	Reject
	(c) the moderating role of low team identifiaction in the relationship between static mascot and purchase inteion	Reject

5. Discussion

This study examined the influence of mascot representation (static, animated, vs. none) on online product pages on sport consumers' social presence, engagement, website satisfaction, revisit intention, and purchase intention. The findings revealed a significant serial mediation effect whereby mascot display influenced website satisfaction, revisit intention, and purchase intention through the mediating roles of social presence and engagement. Furthermore, the study investigated the moderating effect of consumer team identification (high vs. low) on the relationship between mascot display and social presence. The results indicated that animated mascot displays exerted a significant impact regardless of consumers' level of team identification.

The results of the hypothesis testing indicated that mascot display did not have a significant direct effect on website satisfaction, revisit intention, or purchase intention (H1). These findings are consistent with prior research highlighting the potential negative impact of characters or artistic elements in advertising. For instance, Warren et al. (2021) dentified negative effects of humor and character use on consumer perceptions. Similarly, Rifon and Bender (2011) discussed the possibility of negative reactions or the transmission of inappropriate messages through such elements. Based on this evidence, it can be inferred that mascot displays may, in some cases, exert a negative influence on consumers. Hypothesis 2 proposed a sequential relationship among mascot display, social presence, engagement, and consumer behaviors, including satisfaction, revisit intention, and purchase intention. The findings supported this hypothesis, indicating that mascot display significantly enhances social presence, which subsequently increases engagement and leads to positive consumer outcomes. Based on these results, we argue that establishing social presence is a critical first step in facilitating meaningful consumer interaction and

fostering engagement. Meanwhile, high team identification was found to moderate the relationship between animated mascots and both revisit intention and purchase intention, but not website satisfaction (H3). This finding suggests that the effects of animated mascots on revisit and purchase intentions vary depending on the level of team identification (high vs. low). Specifically, among highly identified fans, the static mascot condition did not significantly influence website satisfaction, revisit intention, or purchase intention. These results support the hypothesis and align with marketing research indicating that animated agents in advertisements enhance emotional connections for consumers who strongly identify with the brand (Delbaere et al., 2011). Additionally, they are consistent with findings that animated advertising increases viewer attention and improves information encoding and retrieval through focused engagement (Praveen & Srinivasan, 2022). Lastly, hypothesis 4 was not supported, as no significant moderating effect was observed among fans with low team identification. Upon closer examination, this may be attributed to the lack of a significant relationship between mascot display and consumer behavior outcomes in this group. Furthermore, previous research suggests that cartoon characters in advertising can trigger negative emotional responses or convey inappropriate messages (Rifon & Bender, 2011). This result suggests that certain characters can evoke negative emotions or convey inappropriate messages, weakening the positive connection have with brand, thus failing to link website satisfaction, revisit intention, and purchase intention with e-commerce website design.

5.1. Theoretical and Practical Implications

This research contributes to the existing literature on anthropomorphic mascots in several important ways. First, it extends the study of anthropomorphism into online contexts by examining how anthropomorphic mascots on e-commerce websites influence consumer behavior and subsequent behavioral intentions. While prior studies have primarily focused on humanizing chatbots through visual cues, names, or identities to enhance perceived human-likeness (Go & Sundar, 2019), this study takes a different approach by utilizing animated sports mascots as a unique form of anthropomorphic cue, specifically emphasizing the role of movement. This represents a novel contribution to the literature by investigating the effects of anthropomorphic animals with movement, rather than human or logo-based representations. Building upon these findings, this study provides insights into several key consumer-related outcomes significantly influenced by animated mascot anthropomorphism on online websites.

This study makes a significant contribution to the existing literature on social presence and engagement by offering a novel perspective on mascot promotion. It demonstrates the serial mediating roles of social presence and engagement in the relationship between mascot display and key consumer outcomes, including website satisfaction, revisit intention, and purchase intention. The findings highlight the pivotal role of social presence in the context of mascot anthropomorphism. While Van Doorn et al. (2017) emphasize the need for further research on computerized social presence in technology-based service interactions—particularly regarding how social engagement enhances service experiences—this study directly addresses that call. It shows that both animated and static mascot displays (compared to the absence of a mascot) positively influence website satisfaction, revisit intention, and purchase intention within an online shopping environment. Moreover, the results underscore the critical role of social presence as the psychological mechanism that underlies the effectiveness of anthropomorphic marketing agents, including mascots and chatbots.

Third, this study makes a novel contribution by emphasizing the design of animated mascots as a tool for enhancing social presence. While prior research has shown that

anthropomorphic agents can increase social presence (C. Y. Yoo & Kim, 2005; D. L. Lee & Ahn, 2012; Brasel & Hagtvedt, 2016; Cian et al., 2014), much of this work has focused on animated banner ads, logos, and product images. In contrast, this study is the first to investigate the impact of animated sports mascots, specifically examining how their design (animated vs. static) differentially affects sport consumers' website satisfaction, revisit intention, and purchase intention—mediated by social presence and engagement. The findings reveal a significant moderating effect of team identification. Among consumers with low team identification, there were no significant differences in responses across mascot conditions. However, highly identified consumers demonstrated increased website satisfaction, revisit intention, and purchase intention when exposed to static mascots, as opposed to animated ones—an effect mediated by social presence and engagement. Interestingly, for highly identified consumers, revisit intention was positively influenced by both static and animated mascots. These results contrast with previous findings suggesting universally positive effects of animated displays, instead revealing a more nuanced relationship in which animated mascots may negatively affect website satisfaction and purchase intention among highly identified consumers.

This study offers valuable implications for online retailers aiming to optimize their website advertising strategies and marketing communications. First, while the use of mascots generally enhances marketing outcomes, the findings underscore the importance of mascot design. Compared to no mascot at all, the presence of a mascot—when appropriately designed—can positively influence key marketing metrics. However, the type of mascot (static vs. animated) and the level of fan identification significantly moderate this effect. Therefore, marketers should carefully consider both factors when implementing mascot-based strategies.

Second, this research highlights the critical role of social presence in mediating the positive effects of anthropomorphic chatbots on key customer-related outcomes. The benefits of such technologies rely heavily on the successful evocation of social presence; without it, their effectiveness may diminish. As such, developers should seek expert guidance when designing mascots and chatbots to ensure that these elements foster a strong sense of social presence. This includes careful consideration of movement style when incorporating animated mascots and thorough prototype testing with target consumers to verify that the design effectively supports social interaction and engagement.

5.2. Limitations and Future Research Agenda

This study's theoretical and practical implications highlight several promising directions for future research.

First, the animated mascot condition in this study included hand movements, which may have influenced consumer awareness. Given that upward movements are often associated with positive emotional responses (Guido et al., 2016; Meier & Robinson, 2006), future research should explore the effects of different movement directions (e.g., upward, downward, lateral) and intensities on consumer perceptions and behavior. Second, the use of a single team's mascot (the Houston Rockets) and a geographically diverse participant sample may have introduced bias related to team identification and regional preferences. Future studies should consider either focusing on participants from a specific team's fan base or incorporating mascots from multiple teams to improve the generalizability of findings. Third, while team identification was examined as a moderating variable, its role may not have been fully captured due to the cognitive processing demands required for mascot evaluation. Future research could examine the moderating influence of mascot familiarity, as prior studies suggest that the novelty or familiarity of a mascot may influence social presence and engagement. For well-known teams and mascots, the effect of

perceived movement on consumer responses may be diminished due to reduced novelty and engagement (Chen & Zhu, 2022). Finally, this study focused on an information-based message style ("Don't miss the opportunity…"). Future research should investigate the impact of different types of communication—such as task oriented versus socially oriented messaging—and how these message types interact with mascot presentation (animated vs. static) to influence consumer behavior.

6. Conclusions

This study investigated the impact of mascot movement (static, animated, and none) on consumers' evaluations of sports merchandise on e-commerce websites. The findings demonstrate that mascot display significantly influences website satisfaction, revisit intention, and purchase intention, with these effects sequentially mediated by social presence and engagement. This highlights the strategic importance of incorporating mascots—regardless of movement type—into e-commerce platforms. However, the effects of animated mascots were found to be nuanced and significantly moderated by consumers' level of team identification. Highly identified fans responded more positively to static mascots, likely due to increased engagement without the distraction of animation. In contrast, less identified fans showed no significant differences in response between static and animated mascots.

These findings offer several key theoretical and practical contributions. First, they extend the literature on anthropomorphism into the domain of online retail by identifying mascot movement as a critical factor shaping consumer perceptions and behavioral intentions. Second, the study clarifies the sequential mediating roles of social presence and engagement in linking mascot display to positive consumer outcomes. Third, the moderating role of team identification emphasizes the importance of considering consumer characteristics when designing mascot-based marketing strategies. For highly identified fans, static mascots may be more effective, while less identified fans appear equally receptive to both static and animated designs.

Future research could explore how different aspects of mascot movement—such as speed, style, and emotional expression—affect consumer responses. Additional investigation into the role of mascot familiarity and the generalizability of these findings across different teams, brands, and cultural contexts would also be valuable. Moreover, identifying the optimal balance between animation and user engagement remains an important area for further study. Despite its limitations, this research provides meaningful insights for sports marketers, highlighting the potential of strategically designed mascot displays to enhance consumer experience and drive behavioral outcomes in digital commerce environments.

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