



The trust-attractiveness trade-off: How anthropomorphism and sex appeal shape audience engagement with virtual news anchors

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ABSTRACT

Advancements in image processing and artificial intelligence now enable virtual avatars to more naturally anchor news broadcasts. News broadcasts no longer need human anchors. While the appearance of a human anchor is essentially fixed, virtual anchors can be completely customized through programming. The physical appearance of a virtual anchor is a crucial design decision. This study examines how anthropomorphism and the sex appeal of virtual anchors influence audience trust and attraction to ultimately shape viewing intentions. Through an online survey (N = 377), participants assessed avatars with varying levels of anthropomorphism (high/low) and sexiness (high/low). The results revealed that highly anthropomorphic avatars significantly enhance trustworthiness and attractiveness and increase viewing intention. In contrast, high sex appeal boosts physical attractiveness but reduces perceived trustworthiness and has a limited impact on viewing intention. These findings offer practical guidance for designing virtual anchors that balance human-like traits and sex appeal to optimize audience engagement.

Keywords: virtual anchors, anthropomorphism, sex appeal, artificial intelligence, trustworthiness, physical attractiveness

INTRODUCTION

Over the past decade, advancements in digital technology, artificial intelligence (AI), and animation technology have revolutionized the development of virtual characters. These characters often operate as Virtual YouTubers (VTubers) and engage audiences through livestreams and videos by mimicking human behavior and appearance to amass substantial followers. This trend gained prominence around 2016 with the rise of the Japanese VTuber "Kizuna AI," which quickly became a cultural phenomenon (El Hedhli et al., 2023). Recently, scholarly attention has increasingly focused on the role of avatar appearance and its impact on audience interaction (Gerrath et al., 2024). By leveraging animation and motion-capture technologies, virtual characters can now act like humans.

An advantage of virtual characters is that they allow vloggers to maintain privacy by masking their real identities while adopting virtual personas that align with audience preferences or reflect specific behaviors. Unlike their human counterparts, virtual characters are not bound by physical limitations, which allows creators to customize gender, age, and physical appearance. This aspect fundamentally differentiates them from traditional anchors, as the appearance of virtual characters can be freely adjusted to suit any

communicative purpose (Sakuma et al., 2023). Furthermore, the advancement of social media and streaming platforms, such as YouTube and Twitch, has fueled the rapid growth of virtual characters applications and attracted audiences from diverse demographics and cultural backgrounds.

In terms of design strategy, virtual characters are broadly categorized into anthropomorphic (human-like) and cartoon-like styles. While anthropomorphic characters strive for realism by mimicking human appearances and behaviors, cartoon-like characters intentionally emphasize their non-human nature. Determining the optimal degree of anthropomorphism is critical as it significantly influences persuasive outcomes in communicative agents such as chatbots and virtual influencers (Dabiran et al., 2024; Li et al., 2024; Wang & Peng, 2023).

In addition to anthropomorphism, sexual appeal is an important factor in virtual character design. The literature suggests that visual sexual appeals can enhance audiences' memory for content and increase persuasive effectiveness (Samson, 2018), enhance attractiveness, and evoke emotional resonance (Gurung & Chrouser, 2007). However, audiences may expect news anchors to be highly credible (Metzger et al., 2003). Consequently, sex appeal may boost attention and aesthetic appeal in attractiveness and entertainment but violate role expectations in sincerity and credibility.

Thanks to advancements in AI, virtual characters anchoring news have become a viable option. Understanding how anthropomorphic and sexual appeal influence viewing intentions has thus emerged as a critical research focus. This study investigates the combined effects of anthropomorphism and sex appeal on virtual news anchors' trustworthiness, physical attractiveness, and audience intention to watch.

The theoretical framework regarding virtual characters is detailed first, followed by the study's hypotheses. We then provide the results of the data analysis, while the findings and conclusions are discussed finally.

RELATED WORKS

Virtual characters have become integral to computer games, online videos, and social media platforms, and their presence is increasingly evident in various online applications. Influenced by factors such as anthropomorphism, physical attractiveness, interactivity, and cultural differences, public acceptance of virtual characters has steadily grown. Studies indicate that virtual anchors may outperform human anchors in specific contexts by consistently delivering optimal performances and offering personalized interactions (Gerlich, 2023). Their adaptability to different communicative purposes enhances audience acceptance while minimizing potential conflicts, controversies, or biases against virtualization. Carefully designed virtual anchors with realistic expressions and natural mouth movements can enhance viewers' engagement. Audiences' responses to virtual anchors can be understood through the computers are social actors (CASA) paradigm (Nass & Moon, 2000; Nass et al., 1994), which posits that people apply social rules and heuristics to mediated agents in much the same way they do to human communicators. In news broadcasting, this implies that viewers evaluate virtual anchors using long-established communicator credibility cues, including trustworthiness and expertise, as discussed in the classic literature (Hovland et al., 1953; Ohanian, 1990). Building on this paradigm, parasocial interaction (PSI) theory (Horton & Wohl, 1956) further suggests that audiences may form one-sided relational bonds with on-screen anchors, and that anthropomorphic cues are central to fostering such mediated relationships. Accordingly, virtual anchor design becomes a strategic communication decision that shapes both source credibility and audience engagement.

Anthropomorphism

Virtual characters are non-human entities, yet their anthropomorphic design makes them resemble real humans. Anthropomorphism refers to attributing human characteristics, emotions, or intentions to non-human objects, such as inanimate items, animals, or fictional characters (Epley et al., 2007). While much of the existing research on anthropomorphism has focused on robotics and AI assistants and highlighted its role in fostering trust and interaction (Nowak, 2003), its application to virtual anchors has shown similar benefits. In communication research, anthropomorphic cues primarily drive perceived social presence or the feeling that a mediated communicator is psychologically present with the audience (Lee, 2004). Social presence, in turn, is widely regarded as a key antecedent of PSI in televised and online communication contexts in which audiences develop quasi-relationships with media personalities through repeated exposure to facial

expressions, gaze, and vocal warmth (Hartmann & Goldhoorn, 2011; Horton & Wohl, 1956; Rubin et al., 1985). For virtual news anchors, anthropomorphic features such as photorealistic facial structures, micro-expressions, and natural lip-syncing act as social cues. These cues help enhance source credibility and foster parasocial bonds and ultimately increase audience engagement.

Sex Appeal

Sex appeal is a subjective and culturally influenced expression of attractiveness that is typically associated with physical appearance, behavior, and emotional expression (Dion et al., 1972). Psychological research extends this concept beyond physical attributes and incorporates elements such as attitude, personality, and contextual factors (Gurung & Chrouser, 2007). In the context of virtual character design, sex appeal is often conveyed through features such as visual modeling, clothing choices, gestures, and vocal tone.

In communication research, however, the expectancy violation theory (EVT) (Burgoon, 1993) provides a useful lens for understanding how sex appeal operates in news contexts. The theory holds that audiences hold normative expectations about how communicators should appear and behave in a given communicative role; when these expectations are violated, the meaning attached to the violation depends on the communicator's reward valence and the context. News anchors are an example of a high-credibility role for which audiences hold strong beliefs about professional norms (Metzger et al., 2003). Consequently, while sex appeal may enhance attention and aesthetic evaluation in entertainment-oriented mediated communication, it may simultaneously violate role expectations in news broadcasting, thus eroding perceived sincerity and source credibility.

Viewing Intention

Intention refers to the audience's motivation and behavioral tendency to engage in specific actions and is influenced by psychological and behavioral factors (Ajzen, 1991). The literature indicates that highly anthropomorphic virtual characters can foster emotional connections and participation (Nowak, 2003), while sex appeal effectively captures visual attention. Despite the rising popularity of virtual anchors, few studies have examined how varying levels of anthropomorphism influence viewers' intentions, particularly in professional contexts such as news broadcasting. From a communication standpoint, viewing intention reflects audiences' selective use of media to satisfy informational and social-companionship needs, as conceptualized in uses-and-gratifications research (Rubin et al., 1985). Anthropomorphic anchors are likely to satisfy social-companionship gratifications by enabling PSI, while highly sexualized anchors may instead satisfy entertainment gratifications that are less aligned with the surveillance-oriented motives that drive news consumption. The interplay between anthropomorphism and sex appeal in shaping audience engagement, therefore, remains underexamined and warrants empirical investigation in mediated news contexts.

This study addresses these research gaps by investigating how varying degrees of anthropomorphism and sex appeal in virtual anchors affect trustworthiness and attractiveness to shape viewing intentions. The study also examines whether anthropomorphism and sex appeal can balance attractiveness with professionalism to enhance audience engagement, thereby contributing to a deeper understanding of virtual anchor design in news broadcasting.

HYPOTHESES

This study explores the impact of the anthropomorphism and sexiness of virtual anchors on viewers' intention to view, trustworthiness, and perceived physical attractiveness.

The Influence of Anthropomorphism and Sexiness on Trustworthiness

Emotional connections between audiences and virtual characters often arise when the characters exhibit human-like qualities (Waytz et al., 2010). Features such as facial expressions, body language, and voice interaction contribute to the perception of anthropomorphism and enable audiences to view virtual characters as socially interactive entities. From the standpoint of the CASA paradigm and social presence theory, anthropomorphic cues activate the social heuristics that audiences ordinarily reserve for human

communicators, which yields stronger inferences of warmth, sincerity, and source credibility (Lee, 2004; Nass & Moon, 2000). Higher levels of anthropomorphism are therefore expected to produce greater trustworthiness for virtual news anchors. Based on this, the following hypothesis is proposed:

H1. Highly anthropomorphic virtual news anchors are perceived as more trustworthy than less anthropomorphic ones.

Sex appeal, as a widely used aesthetic design strategy, is particularly effective in enhancing the appeal of virtual characters. A sexy appearance can draw attention, evoke visual pleasure, and elicit emotional responses (Reichert & Lambiase, 2014). Research indicates that sexualized features can enhance a character's aesthetic evaluation and visual engagement in entertainment-oriented contexts (Grabe et al., 2008). However, in the news broadcasting context, where audiences hold strong professional expectations of communicators (Hovland et al., 1953; Metzger et al., 2003), expectancy violations theory (Burgoon, 1993) predicts that highly sexualized appearances constitute a negatively valenced violation of the anchor role and should therefore reduce perceived trustworthiness rather than enhance it. Accordingly, this study proposes:

H2. Highly sexualized virtual news anchors are perceived as less trustworthy than less sexualized ones.

The Influence of Anthropomorphism and Sexiness on Attractiveness

Literature suggests that the anthropomorphic characteristics of virtual characters, such as realistic facial expressions and natural behaviors, significantly enhance audience attraction and engagement. Virtual characters with a high degree of anthropomorphism are often perceived as more attractive because of their authenticity in non-verbal communication (e.g., eye contact and detailed facial expressions), which fosters social presence and emotional resonance (Goris et al., 2020). From a communication standpoint, this pattern is consistent with social presence theory: As anthropomorphic cues raise the perceived presence of the mediated communicator, audiences treat the anchor as a social other and form parasocial bonds, which, in turn, enhance perceived attractiveness through warmth-based heuristics rather than purely physical features (Hartmann & Goldhoorn, 2011; Lee, 2004). Based on these findings, this study hypothesizes:

H3. Highly anthropomorphized virtual news anchors are perceived as more attractive than less anthropomorphized avatars.

The sexualized design of virtual characters plays a crucial role in capturing the audience's attention and increasing attractiveness. Research highlights that sexualized appearances can elicit positive emotions, particularly in entertainment-focused media, and enhance audience evaluations. However, excessive emphasis on sex appeal may undermine credibility and functionality, which requires a balance between aesthetic appeal and practicality (Dubosc et al., 2021). Accordingly, this study hypothesizes:

H4. Highly sexualized virtual news anchors are perceived as more attractive than those with less sexualized appearances.

Viewing Intention

Research indicates that the anthropomorphic features of virtual anchors, such as natural facial expressions and synchronized voice, can significantly enhance audience trust and viewing intention. When virtual anchors display human-like behaviors, such as emotional vocal tones and natural eye contact, viewers are more likely to perceive them as credible and engaging, thereby increasing their intention to continue watching (Huang & Yu, 2023). These anthropomorphic elements support PSI by providing the social cues through which audiences form perceived relationships with on-screen communicators (Horton & Wohl, 1956; Rubin et al., 1985). Within a uses and gratifications framework, such parasocial bonds satisfy social-companionship gratifications during news consumption and translate into stronger intentions to continue viewing. Accordingly, this study hypothesizes:

H5. Audiences are more likely to watch news broadcasts anchored by highly anthropomorphized avatars than less anthropomorphized avatars.

While sexualized appearance designs can attract audiences' initial visual attention, the influence on viewing intention is less consistent. Excessive emphasis on sex appeal may undermine the professionalism of virtual anchors and lead audiences to question their credibility (Dubosc et al., 2021). However, in entertainment-oriented content, sex appeal may still positively influence audience engagement. From a



Figure 1. Virtual anchors used in the study (the authors' own elaboration)

communication theory perspective, the impact of sex appeal on viewing intention is therefore content-bound: Where audiences seek surveillance and informational gratifications, as in news consumption, sex appeal is unlikely to satisfy the core need fulfilled by the medium and may simultaneously violate professional role expectations (Burgoon, 1993; Metzger et al., 2003), thus yielding a null or even adverse net effect on the intention to watch. Accordingly, this study hypothesizes:

H6. The sexual appearance of anchors does not significantly influence audiences' intention to watch news broadcasts anchored by avatars.

METHODOLOGY

Experimental Process

Previous research on sexual appeals in advertisements often operationalizes sexiness through levels of nudity (Reichert & Ramirez, 2000). Following this approach, this study manipulated the sexiness of virtual characters based on their degree of nudity. A 2×2 repeated-measures experimental design was employed, with varying levels of anthropomorphism (high/low) and sexiness (high/low). Four virtual characters were designed to serve as news anchors for the experiment, as illustrated in [Figure 1](#).

Subjects evaluated all four virtual characters, which were presented in random order. For each virtual anchor (virtual character), participants rated anthropomorphism, sexiness, trustworthiness, attractiveness, and viewing intention based on the provided photos. Demographic information, including name, gender, and age, was also collected. Data were collected via an online questionnaire distributed on social media platforms, yielding 508 responses (of which 131 were excluded as invalid).

Measurement

Both anthropomorphism and sexiness were manipulated by variables. To ensure the validity of these manipulations, one item was used to measure anthropomorphism, adapted from El Hedhli et al. (2023), and one item was used to measure sexiness, adapted from Wookey et al. (2009). Trustworthiness was assessed with two items, revised from (Ohanian, 1990), while viewing intention was measured using three items adapted from Hou et al. (2020). [Table 1](#) provides a detailed list of the measurement items. All responses were recorded on a 5-point Likert scale ranging from "1 = strongly disagree" to "5 = strongly agree."

Table 1. Measurement scale

Variable	Measurement item	Source
Anthropomorphism	This virtual anchor looks like a real person.	El Hedhli et al. (2023)
Sexiness	This virtual anchor is sexy.	Wookey et al. (2009)
Trustworthiness	This virtual anchor seems sincere.	Ohanian (1990)
	This virtual anchor seems trustworthy.	
Physical attractiveness	This virtual anchor looks attractive.	Ohanian (1990)
	This virtual anchor looks beautiful.	
Viewing intention	I am willing to watch the news broadcasted by this virtual anchor.	Hou et al. (2020)
	I will try to watch the news broadcasted by this virtual anchor.	
	I plan to watch the news broadcasted by this virtual anchor often.	

Table 2. Manipulate check – Paired samples t-test

Anthropomorphism manipulate check					
Anthropomorphism	Paired samples t-test				
	M	SD	Human like - animation	t-test	p
Virtual anchor A: Human-like conservative	3.158	1.076	Virtual anchor A - virtual anchor C	16.902	p < 0.001
Virtual anchor C: Animation conservative	1.602	0.808			
Virtual anchor B: Human-like sexy	3.281	1.053	Virtual anchor B - virtual anchor D	20.843	p < 0.001
Virtual anchor D: Animation sexy	1.509	0.754			
Sexiness manipulate check					
Sexiness	Paired samples t-test				
	M	SD	Conservative – Sexy	t-test	p
Virtual anchor A: Human-like conservative	2.275	1.133	Virtual anchor A - virtual anchor B	-16.401	p < 0.001
Virtual anchor B: Human-like sexy	4.053	0.835			
Virtual anchor C: Animation conservative	1.784	0.864	Virtual anchor C - virtual anchor D	-20.821	p < 0.001
Virtual anchor D: Animation sexy	3.836	1.004			

Manipulation Check

This study employed a 2×2 repeated-measures experimental design with two levels of anthropomorphism (human-like vs. animation) and two levels of sexiness (conservative vs. sexy dressing). Participants were presented with four virtual anchors and asked to provide responses for each. Paired samples t-tests were used to evaluate the effectiveness of the manipulations.

As shown in **Table 2**, human-like avatars (virtual anchor A and virtual anchor B) exhibited significantly higher levels of anthropomorphism compared to animation avatars (virtual anchor C and virtual anchor D). Similarly, avatars with a sexy appearance (virtual anchor B and virtual anchor D) demonstrated significantly higher levels of sexiness than those with conservative appearance (virtual anchor A and virtual anchor C). These results confirm the successful manipulation of anthropomorphism and sexiness.

Reliability and Validity

This study employed a repeated-measures design in which participants evaluated their attitudes toward all four virtual anchors (human-like conservative, human-like sexy, animation conservative, and animation sexy). The reliability, validity, and discriminant validity of the measurement scales were assessed for each virtual anchor. As shown in **Table 3**, the Cronbach's alpha (CA) values for all constructs exceeded the recommended threshold of 0.70 (Nunnally, 1978), which indicated adequate internal consistency among the measurement items. Similarly, the composite reliability (CR) values were all above the suggested cutoff of 0.70 (Hair et al., 2019) and provided further evidence of construct reliability. In addition, the average variance extracted (AVE) for each construct exceeded the minimum criterion of 0.50 (Fornell & Larcker, 1981), thus indicating that each construct accounted for more than half of the variance in its indicators. The square root of a construct's AVE exceeded its correlation coefficients with all other constructs and exhibited acceptable discriminant validity (Fornell & Larcker, 1981). The heterotrait-monotrait (HTMT) ratio of correlations is an additional method for assessing the discriminant validity of measurement scales. All HTMT values were below the threshold of 0.85 (Henseler et al., 2015), which indicated acceptable discriminant validity.

Table 3. Reliability and validity

	CA	CR	AVE	Discriminant Validity		
				Intention	Attractiveness	Trustworthiness
Virtual anchor A: Human-like conservative						
Intention	0.900	0.938	0.834	0.913	HTMT= 0.832	HTMT = 0.820
Attractive	0.841	0.926	0.863	0.832	0.929	HTMT = 0.683
Trustworthiness	0.885	0.946	0.897	0.820	0.683	0.947
Virtual anchor B: Human-like sexy						
Intention	0.915	0.947	0.856	0.925	HTMT = 0.779	HTMT = 0.762
Attractive	0.856	0.933	0.874	0.779	0.935	HTMT = 0.573
Trustworthiness	0.923	0.963	0.929	0.762	0.573	0.964
Virtual anchor C: Animation conservative						
Intention	0.899	0.937	0.832	0.912	HTMT = 0.822	HTMT = 0.790
Attractive	0.877	0.942	0.891	0.822	0.944	HTMT = 0.710
Trustworthiness	0.871	0.939	0.886	0.790	0.710	0.941
Virtual anchor D: Animation sexy						
Intention	0.903	0.939	0.838	0.915	HTMT = 0.763	HTMT = 0.769
Attractive	0.860	0.934	0.877	0.763	0.936	HTMT = 0.687
Trustworthiness	0.916	0.960	0.923	0.769	0.687	0.961

Table 4. Repeated measures ANOVA analysis

Dependent variable	Trustworthiness		Attractiveness		Intention	
	F-value	p-value	F-value	p-value	F-value	p-value
Anthropomorphism	38.597	< 0.001	17.139	< 0.001	11.361	< 0.001
Sexiness	34.776	< 0.001	15.981	< 0.001	2.856	0.093
Anthropomorphism * sexiness	0.645	0.078	0.953	0.330	0.086	0.770

Table 5. Descriptive statistics and t-test comparison

Virtual news anchor	Trustworthiness: M (SD)	Attractiveness: M (SD)	Intention: M (SD)
Virtual anchor A: Human-like conservative	3.225 (0.805)	3.439 (0.967)	3.389 (0.789)
Virtual anchor B: Human-like sexy	3.003 (0.783)	3.649 (0.886)	3.313 (0.878)
Virtual anchor C: Animation conservative	3.023 (0.784)	3.272 (0.990)	3.231 (0.845)
Virtual anchor D: Animation Sexy	2.678 (0.872)	3.412 (1.014)	3.170 (0.846)
Comparison: Human-like vs. animation	Human-like > animation (difference = 0.263, t = 6.213, p < .001)	Human-like > animation (difference = 0.202, t=4.140, p < 0.001)	Human-like > animation (difference = 0.150, t=3.371, p < 0.001)
Comparison: Conservative vs. sexy	Conservative > sexy (difference = 0.284, t = 5.897, p < 0.001)	Sexy > conservative (difference = 0.175, t = 3.998, p < 0.001)	No significant difference (difference = -0.068, t = -1.690, p = 0.093)

Influence of Anthropomorphism and Sexiness on Trustworthiness

A repeated-measures ANOVA was conducted to examine the effects of anthropomorphism and sexiness on trustworthiness. As shown in **Table 4**, both anthropomorphism ($p < 0.001$) and sexiness ($p < 0.001$) significantly influence trustworthiness. However, their interaction was not significant.

Table 5 presents the means (Ms), standard deviations (SDs), and t-test results, which indicated that human-like virtual anchors exhibited significantly higher trustworthiness than animation-based virtual anchors ($t = 6.213$, $p < 0.001$). This suggests that highly anthropomorphized (human-like) virtual anchors are perceived as more trustworthy than less anthropomorphized (animation) ones.

In contrast, virtual anchors with highly sexualized appearances were rated as less trustworthy than those with less sexualized appearances ($t = 5.897$, $p < 0.001$). Specifically, virtual anchors in sexy attire were perceived as less trustworthy than those in conservative attire.

These findings support both **H1** and **H2**. The pattern aligns with the CASA paradigm and social presence theory: Human-like avatars provide richer social cues, evoke greater perceived presence, and are therefore

evaluated using the same credibility heuristics that audiences apply to human anchors (Lee, 2004; Nass & Moon, 2000). The reduction in trustworthiness associated with sexualized appearance aligns with EVT (Burgoon, 1993): Sexualized cues clash with the professional role schema that audiences hold for news anchors, and the violation is interpreted negatively, thus lowering perceived sincerity and source credibility.

Influence of Anthropomorphism and Sexiness on Physical Attractiveness

A repeated-measures ANOVA was conducted to examine the effects of anthropomorphism and sexiness on physical attractiveness. The results (Table 4) show that both anthropomorphism ($p < 0.001$) and sexiness ($p < 0.001$) significantly influence physical attractiveness, but their interaction was not significant ($p = 0.330$). Table 5 indicates that human-like avatars were rated as more attractive than animation avatars ($t = 4.140$, $p < 0.001$) and demonstrated that highly anthropomorphized (human-like) avatars were perceived as more physically attractive than less anthropomorphized (animation) avatars. Furthermore, highly sexualized avatars were found to enhance physical attractiveness compared to less sexualized avatars ($t = 3.998$, $p < 0.001$). Avatars with sexy attire were perceived as more physically attractive than those with conservative dress.

These findings support both H3 and H4. Within a social presence framework, human-like avatars were perceived as more attractive because their richer nonverbal cues (eye contact, facial micro-expressions) cultivated a stronger sense of co-presence and parasocial connection, rather than purely raising aesthetic judgments (Hartmann & Goldhoorn, 2011; Lee, 2004). The boost in attractiveness produced by a sexualized appearance is consistent with attention-based accounts of sexual cues in mediated communication, which note that such cues capture initial visual interest even when they undermine credibility (Reichert & Lambiase, 2014).

Intention to Watch

The current study used a repeated-measures ANOVA to examine the effects of anthropomorphism and sexiness on the intention to watch news broadcasts anchored by virtual anchors. The results (Table 4) indicated that anthropomorphism significantly influences audiences' intention to watch ($p < 0.001$), while sexiness does not ($p = 0.093$). Additionally, the interaction between anthropomorphism and sexiness was not significant ($p = 0.770$). Table 5 shows that participants have a significantly higher intention to watch news broadcasts anchored by human-like virtual anchors compared to animated ones ($t = 3.371$, $p < 0.001$). This finding suggests that highly anthropomorphized (human-like) virtual anchors are preferred over less anthropomorphized ones (e.g., animated news anchors).

However, no significant differences were found in audience intention to watch news broadcasts anchored by highly sexualized virtual anchors versus less sexualized ones ($t = -1.690$, $p = 0.093$). Virtual anchors with sexiness (sexy attire) did not increase audience intention more than those with conservative appearances when serving as news anchors. These results confirm H5 and H6. Theoretically, the H5 effect is consistent with PSI theory and the uses and gratifications perspective: Audiences appear more willing to consume news from anchors with whom they can form a credible parasocial relationship, and human-like cues are central to that process (Horton & Wohl, 1956; Rubin et al., 1985). The null effect of sex appeal on viewing intention reinforces the EVT-based interpretation: In a surveillance-oriented genre such as news, sexualized cues do not contribute to the gratifications audiences seek and may simultaneously violate role expectations and neutralize any attention-capture benefit.

CONCLUSION AND DISCUSSION

The study examined how anthropomorphism and sex appeal in virtual news anchors shape audience perceptions of trustworthiness and physical attractiveness, and through these, viewing intention. Drawing on an online survey of 377 valid respondents and a 2×2 repeated-measures design, the analysis yielded a credibility-centered account of audience engagement with AI-driven news communicators.

Conclusion

The study indicates that anthropomorphism is a substantive driver of trustworthiness, physical attractiveness, and viewing intention. Highly anthropomorphized (human-like) virtual anchors were rated as significantly more trustworthy and attractive than animation-style avatars. Trustworthiness, in turn, emerged as a key correlate of viewing intention and underscores the importance of perceived source credibility over visual ornamentation in audience engagement with virtual news anchors.

The pattern for sex appeal was more conditional. Highly sexualized avatars were rated as more physically attractive but less trustworthy, and sex appeal did not significantly increase viewing intention for news content. Read through expectancy violations theory, this suggests that sexualized cues clash with the professional role schema audiences hold for news anchors, and the violation is interpreted negatively—eroding source credibility without producing a compensating gain in audience commitment.

Taken together, virtual anchor design in news broadcasting requires balancing source credibility against aesthetic appeal. Anthropomorphic cues, by raising perceived social presence and supporting PSI, simultaneously strengthen credibility and attractiveness. Sexualized cues, by contrast, raise attractiveness at the cost of credibility and yield no net benefit for viewing intention—a trust-attractiveness trade-off that is genre-bound rather than universal.

In sum, perceived trustworthiness emerged as the most consistent correlate of viewing intention across the four anchor conditions. By raising social presence and supporting PSI, anthropomorphic cues build the credibility on which audience engagement with mediated news depends. Visual attractiveness contributed to engagement only when it was consistent with the communicative role of the anchor; in surveillance-oriented genres such as news, sexualized cues do not advance the gratifications audiences seek and may instead violate role expectations. The communicative context, rather than aesthetic strategy alone, should therefore guide virtual anchor design.

Discussion

In light of prior communication research, the present findings both replicate and refine established patterns. The positive effect of anthropomorphism on trustworthiness and attractiveness converges with earlier work on avatars in immersive and collaborative environments (Dubosc et al., 2021; Gorisse et al., 2020), with research on virtual influencers in retail settings (El Hedhli et al., 2023; Gerrath et al., 2024), and with chatbot studies showing that anthropomorphic cues raise perceived humanness and persuasive power (Li et al., 2024; Wang & Peng, 2023). Our results extend these patterns into the news broadcasting context and indicate that the social-cue mechanisms posited by the CASA paradigm and social presence theory (Lee, 2004; Nass & Moon, 2000) generalize beyond commercial and entertainment genres to high-credibility journalistic settings.

The findings depart from prior literature in two notable ways. First, the “what is beautiful is good” heuristic (Dion et al., 1972) and the broader sex-in-advertising literature (Grabe et al., 2008; Reichert & Lambiase, 2014) suggest that sexualized cues should enhance audience evaluation across the board. The present study qualifies this claim: In news broadcasting, sexualized appearance increased attractiveness but reduced trustworthiness and yielded no increase in viewing intention. This pattern is more consistent with expectancy violations theory (Burgoon, 1993) than with a simple beauty-premium account, and it indicates that the persuasive value of sex appeal is genre-bound rather than universal. Second, in contrast to studies of AI news anchors that emphasize expectation-confirmation as the central mechanism (Huang & Yu, 2023), our results foreground a credibility-based pathway: Trustworthiness is the variable that most consistently tracks viewing intention, whereas attractiveness contributes only when it is consistent with the anchor’s professional role.

The principal innovation of the study lies in articulating a trust-attractiveness trade-off in mediated news. By manipulating anthropomorphism and sex appeal jointly within a single 2×2 design, the study isolates the divergent paths through which these two design cues shape audience response: Anthropomorphism operates through social presence and PSI to build source credibility, whereas sex appeal operates through visual salience and is constrained by role expectations. This dual-path account integrates the CASA paradigm, PSI theory, and expectancy violations theory into a single explanatory framework.

Theoretical Contributions

Beyond replicating established patterns in adjacent domains, the present study offers three theoretical contributions to communication research on virtual anchors:

Validation of PSI in AI agents: The findings indicate that anthropomorphism is a substantive driver of trustworthiness and attractiveness in mediated news. By linking realistic facial features and human-like cues to stronger viewing intention, the results support the application of PSI theory (Horton & Wohl, 1956; Rubin et al., 1985) to AI-driven communicators: Audiences appear to apply the same social heuristics to virtual news anchors that they apply to human ones, and the social cues supplied by anthropomorphic design provide the conditions under which parasocial bonds can form within a journalistic context.

Application of EVT: The trust-attractiveness trade-off observed here—in which higher sex appeal raises attractiveness but lowers perceived trustworthiness—extends expectancy violations theory Burgoon (1993) to the design of virtual news anchors. When an anchor's appearance departs substantially from the professional role schema audiences hold for journalists, the violation is interpreted negatively, depressing evaluations of sincerity and source credibility. The study, therefore, situates virtual anchor design within the broader literature on communicator credibility cues (Hovland et al., 1953; Metzger et al., 2003).

Redefining professionalism in digital media: By showing that perceived trustworthiness, rather than physical appeal, most consistently tracks viewing intention in a news setting, the study clarifies the boundary conditions of the “what is beautiful is good” heuristic (Dion et al., 1972). In high-credibility communicative roles, source-credibility cues appear to outweigh aesthetic ones, and audience engagement with virtual anchors operates primarily through credibility rather than attractiveness.

Managerial Implications

The findings of this study provide practical, actionable guidance for industry professionals involved in creating and deploying virtual characters. The “trust-attractiveness trade-off” indicates that design decisions must be carefully aligned with the content's goal.

When news organizations implement virtual anchors, it is more important to emphasize anthropomorphic features than decorative appearances. Trust in mediated news largely depends on social cues such as facial realism, eye contact, and synchronized vocal delivery, rather than on sex appeal, which can actually reduce trust in this genre. Therefore, a conservative style is recommended to enhance journalistic credibility and maintain consistent viewership.

For virtual influencers acting as reliable sources, such as brand ambassadors, educational guides, or health communicators, the same trust issues are likely to arise, and excessive sexualization should be avoided. In entertainment settings where watching for enjoyment is the primary focus, sex appeal can enhance attractiveness without compromising credibility, as it would in news contexts. For AI avatar developers, the design priority is the naturalism of nonverbal behavior—gaze, micro-expressions, lip-sync—rather than cosmetic embellishment. These cues are how audiences infer social presence and form parasocial bonds, and they carry the credibility load on which engagement with virtual news anchors rests. Across these settings, the recommended design strategy is to align the avatar's appearance with the communicative role of the platform rather than with general aesthetic conventions.

Limitations and Future Research

Despite its contributions, this study has several limitations that should be acknowledged. First, the sample primarily consisted of online respondents, which may not fully represent broader demographics or account for cultural differences. Second, the findings are context-specific, focusing exclusively on news content, and may not generalize to other settings, such as entertainment or commercial applications. Third, a significant methodological limitation is the use of static photos rather than dynamic news broadcast videos, which reduces the study's ecological validity. News broadcasting is inherently a dynamic medium that relies on critical audiovisual cues, such as lip-syncing, fluid facial expressions, and bodily gestures, to convey professionalism and emotion. Because static images cannot capture these elements of movement or speech interactivity, the findings may not fully reflect how audiences evaluate virtual anchors in a real-world viewing environment.

Future research could address these limitations by incorporating dynamic video stimuli to yield more realistic assessments and by examining how audience demographics, such as gender and age, shape perceptions of virtual anchors. Additionally, further investigation into emotional engagement and real-time interactivity in avatar design could yield deeper insights into enhancing audience connection and viewing intentions.

Overall, the study points to anthropomorphism as the more reliable design lever for virtual news anchors. It raises trustworthiness, attractiveness, and viewing intention together. Sex appeal raises attractiveness alone and at the cost of trust, with no compensating gain in viewing intention. The findings extend the CASA paradigm, social presence theory, PSI theory, and expectancy violations theory into the domain of AI-driven news communicators and provide a credibility-centered account of audience engagement that distinguishes news from entertainment use cases.

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