



VIRTUAL INFLUENCERS AS VISUAL-CULTURE ARTIFACTS: A PRISMA 2020 Systematic Review

MARIA ANDREA RUIZ-VELASQUEZ ¹

mruiz28@unisalle.edu.co

JOSE ANDRES AREIZA-PADILLA ²

jareiza2@areandina.edu.co

JORGE ISAAC LECHUGA-CARDOZO ³

jorgeisaac.lc@tec.mx

¹Universidad de la Salle, Bogotá, Colombia; Fundación Universitaria Ceipa, Sabaneta, Antioquia, Colombia

²Andina University Institute, Bogota, Colombia

³Business School, Tecnológico de Monterrey, Mexico

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ABSTRACT:

Virtual influencers (VIs) are AI-enabled digital characters increasingly used in brand communication, yet evidence on their consumer effects remains fragmented. Following PRISMA 2020, we searched Scopus and Web of Science (2020–16 Jan 2026; English/Spanish) and synthesized 26 peer-reviewed studies. Results show that visual design cues (realism, anthropomorphism, style coherence) and transparency practices (disclosure of artificiality/sponsorship) act as signals shaping credibility/trust and perceived authenticity, often via parasocial mechanisms and engagement, thereby influencing brand attitudes and purchase intention. We integrate these findings with a visual-culture lens and outline implications and research priorities.

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1. Introduction

Influencer marketing has become one of the most prominent strategies in contemporary digital marketing, as content creators act as cultural intermediaries who translate brand meanings into visual and performative narratives across platforms such as Instagram, YouTube, and TikTok. In these environments, influencers do more than amplify commercial messages: they shape perceptions, stimulate interaction, and steer behavior, particularly in purchase-related decision-making (Rabby et al., 2025). As Mitchell (1992) argues in his discussion of the pictorial turn, contemporary culture increasingly organizes meaning through images, rather than through purely linguistic forms. From a visual-culture perspective, this phenomenon can be understood as a system for producing and circulating images in which persuasion is grounded in visual codes such as aesthetics, staging, editing, style, and repetition and in the social legitimacy conferred by on-screen signals of authenticity, expertise, and closeness.

In parallel, the development and adoption of artificial intelligence (AI) in marketing processes has enabled a notable shift: the rise of “Virtual Influencers”, also known in the literature as “AI Influencer”, “Digital Human” or “Virtual Human”, or even “Computer-Generated Influencers (CGI influencers)”. These are non-human digital characters created through software and, increasingly, supported by generative AI. They operate as coherent communicative identities with defined traits, personality, and narrative capable of interacting with users and representing brands within social media ecosystems. Virtual influencers can be understood not only as marketing tools but also as visual-cultural artifacts whose aesthetic design, visual narratives, and symbolic representations contribute to shaping identities, lifestyles, and aspirational imaginaries within digital media environments.

All of this suggests that contemporary visual communication emerges from hybrid forms that combine images, text, and technological mediation, as Mitchell (2005) argues, “all media are mixed media”. For conceptual consistency, this review uses virtual influencer (VI) as the umbrella term. Related labels such as AI influencer, CGI influencer, digital human, virtual human, vtuber, and avatar influencer are treated as terminological variants when they refer to artificial personas operating as consumer-facing endorsers in digital environments.

This manuscript aligns with the scope of VISUAL Review by approaching virtual influencers not only as marketing instruments but also as visual-cultural artifacts whose persuasive effects are mediated by representation. Unlike human influencers, whose public presence is anchored in embodiment and biography, virtual influencers depend on a visual and technical architecture composed of modeling, rendering, stylistic consistency, realism cues, expressivity, and scripted interaction. Accordingly, outcomes such as trust, credibility, authenticity, brand attitudes, and purchase intention should not be interpreted solely as managerial or psychological responses; they are also shaped by how these artificial agents are visually encoded, narratively stabilized, and culturally recognized across platform environments. Against this backdrop, the present systematic literature review synthesizes recent empirical evidence on virtual influencers and consumer behavior while making a specific contribution: to explain consumer-response effects through a visual-culture lens that foregrounds representation, realism, stylization, disclosure, and symbolic legibility.

1.1. AI-Driven Transformation of Digital Marketing

Artificial intelligence (AI) is reshaping digital marketing through automation, decision optimization, and personalized communication. Prior research indicates that AI can enhance engagement and consumer interaction by tailoring content to specific profiles and situational contexts (Behara et al., 2024). At the same time, AI and generative AI in particular are transforming the production and circulation of visual materials in advertising, thereby reconfiguring brand-consumer relationships and raising ethical concerns related to legitimacy, transparency, and data use (Hocutt, 2024; Islam et al., 2024; Kumar et al., 2024; Saura et al., 2024).

From a visual-culture perspective, these developments suggest that digital persuasion increasingly depends not only on message optimization, but also on the production and circulation of images whose effectiveness is grounded in visual codes such as aesthetics, staging, editing, style, repetition, and on-screen signals of authenticity, expertise, and closeness.

1.2. AI-Mediated Consumption Dispositions and Consumer Behavior

A growing body of research examines how AI influences consumer behavior, particularly purchase propensity and the formation of attitudes and preferences. Empirical work has reported associations between the use of AI and shifts in purchase intention, product evaluation, and user experience (Berlilana, 2025). Related studies suggest that AI-enabled strategic personalization can strengthen the perceived effectiveness of campaigns and shape consumers' behavioral responses (Binlibdah, 2024). In e-commerce settings, AI has also been associated with stronger loyalty when it improves customer experience, reduces friction, and increases the relevance of recommendations (Ratner et al., 2025).

Yet, when virtual influencers are involved, analyzing consumer behavior requires additional dimensions that are often less explicit in "conventional" digital marketing: authenticity (can a non-human entity be perceived as authentic?), agency (who is actually speaking?), trust (can consumers trust an artifact?), and transparency (is the artificial nature and the commercial linkage clearly disclosed?). These issues are not peripheral; they sit at the core of how the phenomenon is culturally interpreted and, consequently, they condition behavioral outcomes. Their relevance lies not only at the level of discourse, but also in visual cues such as realism, stylization, disclosure, and narrative continuity, which shape how artificial agents are interpreted within platform cultures.

1.3. Virtual Influencers as Visual Culture Artifacts and an Emerging Research Core in Digital Marketing

From a semiotic perspective, images operate as systems of signification that communicate layered meanings through processes of denotation and connotation (Barthes, 1964). Furthermore, computational methods have enabled the large-scale analysis of images as cultural data within digital media environments (Manovich, 2016). Within this visual environment, image-based communication shapes identities and organizes recognition, which helps explain why influencers and, increasingly, virtual influencers can function as socially legible actors in digital communication.

From this perspective, influencer marketing leverages the symbolic connotations of brands as vehicles and creators of meaning, communicating lifestyles, identities, and aspirational values. This is consistent with research suggesting that endorsers, including influencers, can transfer symbolic attributes such as attractiveness, credibility, and authenticity to products, thereby strengthening aspirational appeal and supporting consumer identity formation (Aliyev, 2025).

Influencer marketing plays a relevant role in brand "evangelization" and in building communities around products and lifestyle imaginaries (Rabby et al., 2025). From this perspective, influencers produce visual content that circulates within digital media ecosystems and can therefore be understood not only as endorsers, but also as visual-cultural artifacts in contemporary digital culture.

With the convergence of AI and digital marketing, virtual influencers have emerged as a distinctive phenomenon. They can be defined as computerized creations that interact with users on social media and reshape digital communication dynamics by operating as coherent visual identities within platforms (Conti et al., 2022a). Recent scholarship has framed this development as a growing trend and a new research core in digital marketing (Pileliene & Bogoyavlenska, 2025). The emerging evidence points to several main lines of inquiry. First, comparative studies have examined differences between human and virtual influencers, suggesting that human influencers often retain advantages in perceived credibility, whereas virtual influencers may be particularly attractive and effective at driving brand interaction due to aesthetic control and narrative consistency (Belanche et al., 2024). Second, research has begun to address the psychological implications of consuming content produced by virtual influencers, exploring how audiences process and respond to non-human yet socially active identities (Jin & Viswanathan, 2025). Third, a related stream has engaged more explicitly with contested issues ethics, authenticity, and disclosure and their links to purchase intention, given that this form of persuasion relies on visual cues of verisimilitude and socially anchored rules of trust (Khalfallah & Keller, 2025; Diwanji, 2026).

From this standpoint, the constructs most frequently examined in consumer research trust, credibility, authenticity, engagement, brand attitude, and purchase intention should not be treated as purely psychological or managerial outcomes. They are also mediated by representation. Virtual influencers are built through visual codes that organize meaning: degrees of realism and stylization, facial and bodily expressivity, aesthetic coherence, narrative continuity, interface cues, and disclosure

markers. In this sense, consumer response is inseparable from the visual grammar through which artificial personas are made culturally recognizable, desirable, and believable within platform environments. As Hall (1997) argues, representation is the production of meaning through language.

This argument can be reinforced by drawing more explicitly on social semiotics and platform-oriented visual analysis. From a social semiotic perspective, images do not merely illustrate meanings already given in language; they organize meaning through representational, interactional, and compositional resources that shape how viewers interpret social actors, relationships, and affective cues. This is especially relevant in digital environments, where visual signs such as gaze, facial expression, framing, stylization, and salience influence how figures are read as emotionally engaging, credible, or distant (Feng & O'Halloran, 2012). In addition, research on platforms as semiotic technologies shows that visual meaning is also conditioned by interface design, circulation logics, and forms of interaction that organize visibility and participation online (Moschini, 2018; Djonov & van Leeuwen, 2018). From this perspective, virtual influencers should be understood not only as marketing devices but also as platform-mediated visual constructions whose persuasive effects depend on how artificial personas become legible, interpretable, and socially meaningful within specific digital environments.

Taken together, this literature positions virtual influencers as a relevant site for connecting digital marketing with visual culture. Rather than treating consumer-response variables as self-contained outcomes, this perspective makes it possible to examine how representation, platform visibility, and visual legibility condition the ways artificial personas become persuasive, culturally recognizable, and socially credible in digital media. For this reason, there is a need to synthesize the available empirical evidence with rigor, identify points of convergence and unresolved gaps, and advance a research agenda that integrates marketing logics with questions central to visual culture.

More specifically, this review contributes to the literature in two ways. First, it systematizes recent empirical evidence on virtual influencers and consumer behavior using a PRISMA 2020 framework. Second, and more importantly, it extends prior review efforts by interpreting consumer-response outcomes through a visual-culture perspective. This makes it possible to explain not only what outcomes are most frequently reported, but also how representation through realism, stylization, aesthetic coherence, narrative continuity, and disclosure helps produce those outcomes in digital environments.

Study objective: This article presents a systematic literature review on virtual influencers and consumer behavior with three aims: (1) to map the most frequently examined variables, including trust, perceived authenticity, engagement, purchase intention, and brand attitudes; (2) to identify the predominant theoretical and methodological approaches; and (3) to propose implications and future research directions from an integrative perspective connecting digital marketing and visual culture.

2. Methodology

2.1. Study Design and Reporting Standard

This study is a Systematic Literature Review (SLR) synthesizing recent empirical evidence on virtual influencers and their relationships with key consumer-behavior outcomes (e.g., trust, engagement, brand attitudes, and purchase intention). The review is reported in accordance with PRISMA 2020 to ensure transparency and reproducibility across identification, screening, eligibility assessment, and inclusion. In line with the journal's visual-culture orientation, virtual influencers are conceptualized as visual-culture artifacts, and the review also considers interpretive dimensions such as visual verisimilitude, disclosure practices, and ethics.

An internal review protocol was defined before the formal screening stage to guide the research question, eligibility criteria, information sources, search strategy, selection procedures, extraction fields, quality appraisal, and synthesis plan. Because this protocol was not preregistered and is not publicly accessible, its timing and original version cannot be independently verified, which is acknowledged as a limitation. To mitigate this constraint, the manuscript reports the protocol components in operational detail including the full search strings, staged selection workflow, extraction fields, appraisal logic, and synthesis procedures so that the review can be assessed and replicated from the information provided here. During the review process, minor procedural refinements were introduced to improve retrieval sensitivity and reporting clarity. These refinements did not alter the

review objectives or the core eligibility criteria. They included refinement of search terminology to capture common labels for virtual influencers while retaining the dual-block structure; clarification of the temporal boundary to include online-first/early access items indexed up to the final export date; and standardization of full-text retrieval using a fixed window and logged retrieval attempts for consistent “not retrieved” classification.

2.2. Research Question and Scope

The review is guided by the following research question:

RQ: What are the main findings (empirical evidence and conceptual insights) reported in recent literature on virtual influencers?

Conceptual scope. A virtual influencer/AI influencer is defined as a non-human digital character generated through software (and potentially AI/generative AI) that operates as a communicative agent on social media and participates in persuasion, consumption, and the production of visual meaning.

Outcomes of interest. Trust, credibility, perceived authenticity, engagement, brand attitudes, purchase intention, ethical perceptions, and effects associated with transparency/disclosure. The protocol further prespecified the primary outcomes of interest and the analytic lens used to integrate digital marketing constructs with a visual culture perspective.

2.3. Information Sources

Two multidisciplinary databases were used due to their relevance to marketing, communication, and organizational research: Scopus and Web of Science Core Collection (WoS). Searches were executed and records exported on 16 January 2026, which served as the indexing cut-off. Records were restricted to peer-reviewed journal articles published from 2020 onward and written in English or Spanish (potential language bias is acknowledged).

To reduce retrieval bias and avoid restricting the corpus to studies explicitly labeled as “AI,” the search strategy employed two complementary query blocks: (1) a core phenomenon-and-outcomes block capturing virtual-influencer labels and consumer/brand outcomes without requiring AI terminology, and (2) a technology-enabling block (AI/ML/GenAI terms) capturing records where enabling technologies are central but labels vary. Searches were applied to Scopus TITLE-ABS-KEY and WoS Topic (TS) fields. Records were exported, merged, and deduplicated prior to screening using DOI and bibliographic matching (title/author/year), with manual verification when needed.

For traceability, retrieval counts prior to merging/deduplication were: Scopus Block 1 = 680, Scopus Block 2 = 420, WoS Block 1 = 540, and WoS Block 2 = 381. Full database-specific search strings (including field tags and filters) are reported to enable replication.

Reliance on two databases may under-represent specialized outlets. To mitigate coverage bias, backward and forward citation searching was conducted on included studies and field-defining papers; newly identified records were screened using the same eligibility criteria and selection workflow.

2.4. Search Strategy and Reproducibility

The search strategy was developed through: (1) identification of core terms, (2) expansion via synonyms and terminological variants (e.g., CGI influencer, digital human, vtuber, avatar), and (3) combination with consumer behavioral outcomes.

2.4.1. Core terms and semantic expansion:

- Phenomenon: “virtual influencer”, “AI influencer”, “CGI influencer”, “digital human”, vtuber*, avatar*
- Technology-enabling sensitizing terms (used in the complementary query): “artificial intelligence”, AI, “machine learning”, “deep learning”, “generative artificial intelligence”, “generative AI”, “gen AI”.
- Consumer behavior: “consumer behavior”, trust, engagement, “purchase intention”, “brand attitude”, credibility, authenticity

2.4.2 Search Strings by Database

To minimize retrieval bias, the search strategy was implemented in two complementary blocks. First, a core query captured studies on virtual influencers as the focal phenomenon in digital marketing and consumer contexts without requiring explicit AI terminology, recognizing that many VI studies do not mention “artificial intelligence” in titles/abstracts/keywords. Second, an enabling-technology query was run in parallel to retrieve studies that explicitly foreground AI/ML/generative AI in relation to VIs. Results from both queries were merged, duplicates were removed, and the same eligibility criteria were applied during screening and full-text assessment.

Scopus (TITLE-ABS-KEY)

The Scopus search was executed in TITLE-ABS-KEY using two complementary queries. Query A (core) captured virtual influencers and consumer-related outcomes without requiring explicit AI terminology. Query B (technology-enabling sensitivity search) captured studies that explicitly foreground AI/ML/GenAI in relation to virtual influencers. Both queries were restricted to peer-reviewed journal articles published from 2020 onward and written in English or Spanish.

Query A (core):

TITLE-ABS-KEY("virtual influencer*" OR "AI influencer*" OR "cgi influencer*" OR "computer-generated influencer*" OR "virtual human*" OR "digital human*" OR vtuber* OR avatar*) AND TITLE-ABS-KEY("influencer marketing" OR endorsement* OR advertis* OR "social media" OR Instagram OR TikTok OR YouTube OR "live streaming") AND TITLE-ABS-KEY("consumer behavior" OR trust OR credibil* OR engag* OR "purchase intention" OR authentic* OR "brand attitude*") AND (LIMIT-TO(DOCTYPE,"ar")) AND (LIMIT-TO(LANGUAGE,"English") OR LIMIT-TO(LANGUAGE,"Spanish")) AND (PUBYEAR > 2019)

Query B (technology-enabling sensitivity search):

TITLE-ABS-KEY("virtual influencer*" OR "AI influencer*" OR "cgi influencer*" OR "computer-generated influencer*" OR "virtual human*" OR "digital human*" OR vtuber* OR avatar*) AND TITLE-ABS-KEY("artificial intelligence" OR AI OR "machine learning" OR "deep learning" OR "generative artificial intelligence" OR "generative ai" OR "gen ai") AND (LIMIT-TO(DOCTYPE,"ar")) AND (LIMIT-TO(LANGUAGE,"English") OR LIMIT-TO(LANGUAGE,"Spanish")) AND (PUBYEAR > 2019)

Web of Science (TS)

The Web of Science search was conducted using the Topic (TS) field (title, abstract, and keywords) through two complementary queries. Results were refined to include only journal articles in English or Spanish within the 2020–2026 window (export date: 16/01/2026).

Query A (core):

TS=("virtual influencer*" OR "AI influencer*" OR "cgi influencer*" OR "computer-generated influencer*" OR "virtual human*" OR "digital human*" OR vtuber* OR avatar*) AND TS=("influencer marketing" OR endorsement* OR advertis* OR "social media" OR Instagram OR TikTok OR YouTube OR "live streaming") AND TS=("consumer behavior" OR trust OR credibil* OR engag* OR "purchase intention" OR authentic* OR "brand attitude*")

Query B (technology-enabling sensitivity search):

TS=("virtual influencer*" OR "AI influencer*" OR "cgi influencer*" OR "computer-generated influencer*" OR "virtual human*" OR "digital human*" OR vtuber* OR avatar*) AND TS=("artificial intelligence" OR AI OR "machine learning" OR "deep learning" OR "generative artificial intelligence" OR "generative ai" OR "gen ai")

Refinements: DOCUMENT TYPES=(Article); LANGUAGES=(English OR Spanish); Timespan: 2020–2026.

2.4.3 Exclusions (NOT) and Coverage Bias Control

Rather than applying a rigid NOT block at the search stage, which can generate false negatives by removing potentially relevant articles due to tangential mentions, topic-based exclusions (e.g., VR, metaverse, and chatbots when not directly related to virtual influencers) were implemented during the screening (title/abstract) and eligibility (full-text) stages.

2.5. Eligibility Criteria (Inclusion/Exclusion)

Eligibility criteria were defined a priori and applied consistently across screening stages. Given heterogeneity in the virtual-influencer evidence base, criteria were operationalized using a pragmatic PICOS/SPIDER-informed logic to specify the focal phenomenon, context, eligible evidence types/designs, and relevant outcomes. Inclusion and exclusion rules are summarized in Table 1 and were used to standardize screening decisions.

We included peer-reviewed journal articles in English or Spanish published from 2020 up to the final database export date (16-01-2026). Studies were eligible if virtual influencers (or equivalent labels such as AI/CGI influencers, digital/virtual humans, vtubers) were the central phenomenon and if the study reported outcomes relevant to consumer responses and/or brand communication. Eligible evidence primarily comprised empirical studies (experiments, surveys including SEM/PLS-SEM, mixed-methods with empirical components, and platform-analytics studies). A limited number of conceptual/theoretical papers were included only when they directly focused on virtual influencers and provided an explicit framework aligned with the review objectives (e.g., definitions, boundary conditions, or interpretive constructs relevant to the digital marketing–visual culture interface).

Inclusion criteria

1. Document type: Peer-reviewed journal research articles.
2. Phenomenon: Virtual influencers (and equivalent terms) as the central focus.
3. Context: Digital marketing, consumer behavior, and/or brand communication (including influencer marketing on social platforms).
4. Outcomes: Consumer/attitudinal/behavioral outcomes (e.g., trust/credibility, authenticity, engagement, purchase intention, brand attitudes), including disclosure/transparency or ethical perceptions when linked to consumer/brand responses.
5. Timeframe: 2020 to final export date (16-01-2026).
6. Language: English or Spanish.
7. Evidence type: Empirical designs; conceptual/theoretical papers only if they provide a directly applicable framework for interpreting VIs in consumer/brand communication.

Exclusion criteria

- Conceptual/theoretical papers where VIs are not central or where no explicit consumer/brand-communication framework is provided.
- Studies not primarily focused on VIs (e.g., VR/metaverse/chatbots/robots) unless VIs are examined as a distinct case with consumer/brand outcomes.
- Purely technical papers without perception-, attitudinal-, or consumption-related outcomes.
- Editorials, viewpoints, non-peer-reviewed sources, and grey literature.
- Duplicate records (removed during deduplication)

Table 1. Eligibility criteria operationalized via PICOS/SPIDER logic

Dimension	Operational definition (what qualifies)	Inclusion rule	Exclusion rule
Population / Sample	Human participants (consumers/users) and/or consumer-facing data (e.g., social media users, followers, engagement data)	Studies with consumer/market-facing samples or datasets relevant to consumer response	Purely technical samples/data with no consumer/communication implication
Phenomenon / Exposure	Virtual influencers and close equivalents: AI influencers, CGI influencers, digital humans, virtual humans, vtubers, avatar influencers	Virtual influencer is the central phenomenon examined	VI only mentioned tangentially; main object is VR/metaverse/chatbots/robots without explicit VI focus
Context	Digital marketing, influencer marketing, brand communication, social media platforms, consumer decision contexts	Marketing/consumer/brand communication setting is explicit	Context unrelated to consumer/brand communication (e.g., engineering-only rendering contexts)

Design / Evidence type	Empirical: experiments, surveys (SEM/PLS-SEM), mixed methods with empirical component, platform analytics; plus limited conceptual papers	Empirical designs as above; conceptual papers only if they provide a clear, applicable framework aligned with objectives	Editorials, commentaries, non-peer-reviewed sources; conceptual papers lacking explicit framework or relevance to VI + consumer/brand outcomes
Outcomes	Consumer behavior or consumption-relevant psychological/attitudinal variables: trust/credibility, authenticity, engagement, brand attitude, purchase intention; plus disclosure/ethics when tied to consumer response	At least one eligible consumer/brand outcome is reported or theorized in a directly applicable way	No consumer/brand outcomes (e.g., purely computational/technical outcomes)
Time period	2020 onward, up to the final export date	Published from 2020 to 16-01-2026	Outside the time window
Language	English or Spanish	English or Spanish full text	Other languages
Document type	Peer-reviewed journal research articles	Journal articles (peer-reviewed)	Grey literature, theses, books/chapters, conference-only papers [unless you explicitly include them]

Source: Authors' own elaboration, 2026

2.6. Study Selection Process (PRISMA 2020)

Study selection followed PRISMA 2020 and the predefined eligibility criteria (Section 2.5) in three stages. Records from Scopus and Web of Science were merged, deduplicated using DOI and bibliographic matching (title/author/year), and manually verified when needed. Titles and abstracts were screened to exclude out-of-scope studies (e.g., virtual influencers not central; no consumer/brand outcomes; purely technical papers). Full texts were then assessed to confirm eligibility, and reasons for exclusion were recorded and summarized in Table 2. All selection decisions were documented to ensure transparency, with final counts reported in Section 2.10 and Figure 1.

Selection decisions were documented step by step to preserve transparency and replicability. When uncertainty arose during full-text assessment, decisions were resolved through discussion against the predefined eligibility criteria rather than by ad hoc judgment. Because the review did not calculate a formal inter-rater agreement statistic for study selection, the process is reported as a transparent PRISMA-based screening procedure rather than as a reliability study.

2.7. Data extraction

A standardized extraction template was developed and piloted on a small subset of studies before full extraction to ensure clarity and consistency across fields. Two reviewers then extracted data independently and cross-checked all entries. Discrepancies were resolved through discussion against the predefined extraction criteria and the original full text; when needed, doubtful cases were reviewed jointly until consensus was reached. The extraction form captured study identification (author/year/DOI), context (country/setting), virtual influencer characteristics and platform, design and sample, key constructs/measures, main findings, author-reported limitations, and notes relevant to a visual-culture reading (e.g., representation, realism, aesthetics, disclosure).

2.8. Quality Assessment / Risk of Bias (Without Excluding Studies)

Because empirical studies on virtual influencers are methodologically heterogeneous (quantitative, qualitative, and mixed-methods), we used an adaptable and design-sensitive appraisal tool: the Mixed Methods Appraisal Tool (MMAT), 2018 version, to assess the methodological quality of the empirical evidence.

Each empirical study was appraised using the MMAT pathway aligned with its study design. MMAT item-level judgments (Yes/No/Can't tell) were recorded at the study level and retained in the review audit log. To summarize appraisal results in an interpretable way, we computed a simple categorical

rating based on the number of MMAT criteria met within the relevant pathway: High (4-5 “Yes”), Moderate (3 “Yes”), and Low (0-2 “Yes”). Appraisal outcomes were not used as an exclusion criterion; rather, they informed the weighting of evidence in the narrative synthesis.

Conceptual papers were not appraised with MMAT due to its empirical focus. Instead, they were assessed narratively using predefined criteria: conceptual clarity, internal coherence, definitional precision, and direct relevance to the review objectives. These judgments were used to contextualize conceptual claims in the synthesis rather than to exclude papers.

Exact item-level MMAT judgments were recorded during the review process to support internal appraisal consistency and to contextualize the narrative synthesis; however, these item-level records are not reproduced study by study in the present manuscript.

2.9. Evidence Synthesis Methods

A thematic/narrative synthesis was conducted on the 26 included studies using a structured coding approach that combined deductive codes aligned with the review objectives (trust/credibility, authenticity, engagement, brand attitudes/purchase intention, and disclosure/ethics) and inductive refinement based on recurring patterns in results and discussion. Traceability was supported through internal theme-by-study tracking during coding, together with consistent citation of supporting studies when reporting each theme. In line with the journal’s visual-culture orientation, the coding also captured representation/verisimilitude cues, aesthetic/narrative framing, disclosure signals, and ethical meaning-making. Due to heterogeneity in designs, measures, and reported statistics, no meta-analysis was conducted. Confidence in findings was contextualized through transparent reporting of study designs, measures, and limitations, noting where evidence remains limited.

Where the evidence base was methodologically thinner or conceptually less consistent, this was reflected in the scope and confidence of the narrative claims rather than masked through uniform reporting.

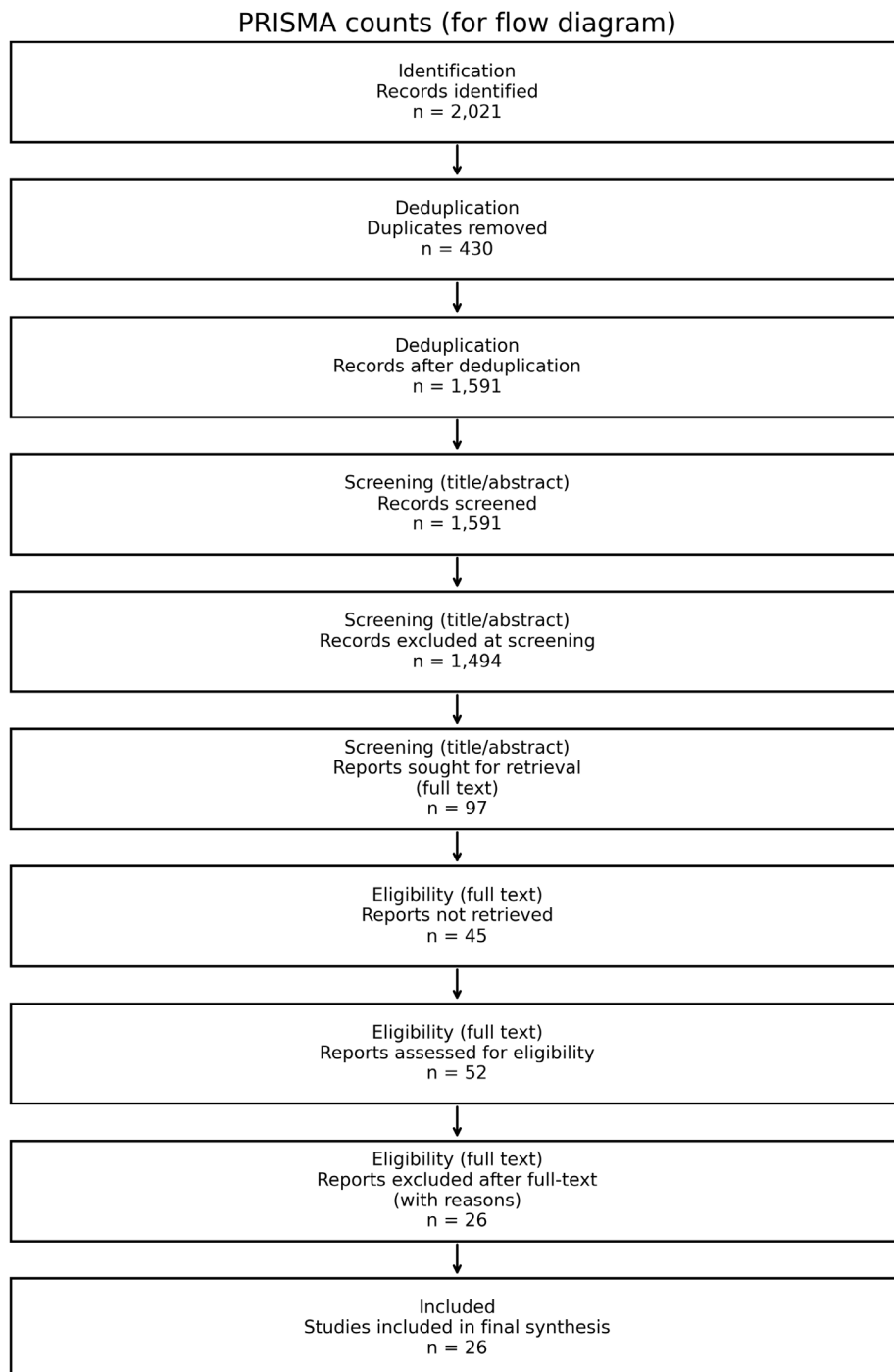
2.10. PRISMA 2020 Flow and Count Traceability

To distinguish bibliometric field mapping from PRISMA-based evidence synthesis, the bibliometric mapping (VOSviewer) was conducted on the deduplicated search dataset prior to screening (N = 1,591 unique records), whereas the PRISMA flow below documents the screening and eligibility process leading to the final included corpus (n = 26). The database search initially identified 2,021 records (combined total from the core query and the technology-enabling sensitivity query). After merging results, 430 duplicates were removed, leaving 1,591 unique records. During title/abstract screening, 1,494 records were excluded for failing to meet eligibility criteria, and 97 reports were sought for full-text assessment. Of these, 45 reports could not be retrieved in full text, resulting in 52 full texts assessed for eligibility. Finally, 26 full-text articles were excluded based on predefined reasons, and 26 studies were included in the final synthesis.

Table 2. Reasons for Full-Text Exclusion (n = 26)

Reason for exclusion	Operational definition (replicable criterion)	n
Not focused on virtual influencers as the core object	The primary focus is not on VI/AI influencers/CGI influencers/digital humans/vtubers/avatars	8
Non-empirical and non-eligible (editorials/commentaries/reviews; conceptual papers not meeting the conceptual-eligibility rule)	Editorial, conceptual essay without data, commentary, or review	6
No consumer-related outcomes	Does not measure trust, authenticity, engagement, brand attitudes, or purchase intention	5
Technical focus without a consumption dimension	Technology/modeling/AI without perceptual or behavioral evaluation	3
Outside language/time/document-type criteria	Language other than English/Spanish, outside the time window, or not an “article”	2
Residual duplicate	Duplicate detected late due to incomplete metadata	2
Total		26

Source: Authors’ own elaboration, 2026

Figure 1. PRISMA 2020 study selection flow with counts.

Source: Authors' own elaboration, 2026.

3. Results

3.1. Included Corpus and Synthesis Logic (n = 26)

The final corpus comprises 26 studies (Table 3) examining virtual influencers/virtual humans/artificial endorsers on digital platforms and their links to consumer-behavior and brand-communication outcomes. Studies were included for their direct relevance to the review objectives: (1) mapping key variables (e.g., trust, perceived authenticity, engagement, purchase intention, and brand attitudes), (2) characterizing dominant theoretical and methodological approaches, and (3) informing implications and a future research agenda at the intersection of digital marketing and visual culture.

The synthesis is structured around these objectives and integrates three evidence layers: (1) causal/explanatory evidence from experiments, comparative designs, and mediation models; (2) relational/psychosocial evidence on mechanisms such as parasociality, personification, and acceptance of artificial agents; and (3) platform/context-level evidence from comment analytics, sentiment analysis, and related computational approaches linking observed behavior to content and disclosure practices.

Table 3. Included studies in the systematic literature review

N°	Title	Author(s)	Year	Source
1	An Exploration of the Influencing Factors of Virtual Influencers on Consumers' Purchase Intentions	Zhang, W.	2025	Zhang, W. (2025). An Exploration of the Influencing Factors of Virtual Influencers on Consumers' Purchase Intentions. <i>Management: (Montevideo)</i> , (3), 327.
2	Artificial Intelligence in Influencer Marketing: A Mixed-Method Comparison of Human and Virtual Influencers on Instagram	Looi, J., & Kahlor, L. A.	2024	Looi, J., & Kahlor, L. A. (2024). Artificial intelligence in influencer marketing: A mixed-method comparison of human and virtual influencers on Instagram. <i>Journal of Interactive Advertising</i> , 24(2), 107-126.
3	Artificial Intelligence Influencers' Credibility Effect on Consumer Engagement and Purchase Intention	Jayasingh, S., Sivakumar, A., & Vanathaiyan, A. A.	2025	Jayasingh, S., Sivakumar, A., & Vanathaiyan, A. A. (2025). Artificial intelligence influencers' credibility effect on consumer engagement and purchase intention. <i>Journal of Theoretical and Applied Electronic Commerce Research</i> , 20(1), 17.
4	Automated Parasociality: From Personalization to Personification	Andrejevic, M., & Volcic, Z.	2025	Andrejevic, M., & Volcic, Z. (2025). Automated parasociality: from personalization to Personification. <i>Television & New Media</i> , 26(4), 421-437.
5	Brand Evangelism in the Digital Era: The Impact of Data-Driven Influencer Marketing	Rabby, F., Murthy, Y. S., & Bansal, R.	2025	Rabby, F., Murthy, Y. S., & Bansal, R. (2025). Brand evangelism in the digital era: The impact of data-driven influencer marketing. <i>Journal of Open Innovation: Technology, Market, and Complexity</i> , 11(2), 100552.
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	authenticity in advertising effectiveness within AI influencer marketing			Computers in Human Behavior: Artificial Humans, 2(2), 100100.
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Source: Authors' own elaboration, 2026.

3.2. Results aligned with Objective 1: Mapping the most studied variables

The first objective was to map the variables most frequently examined in the literature: trust, perceived authenticity, engagement, purchase intention, and brand attitudes. Across the included corpus, these constructs form a recurrent analytical core, yet they play different roles within the explanatory models reported in prior studies. First, some variables are primarily treated as mediating mechanisms most notably trust/credibility and perceived authenticity through which the effects of virtual influencer cues are translated into downstream outcomes.

Second, other variables are more commonly positioned as end outcomes, particularly purchase intention and brand attitudes. Finally, a third set of factors tends to operate as boundary conditions or interpretive signals that shape how consumers evaluate virtual influencers, such as realism, human-likeness, social cues, and disclosure.

To ensure methodological traceability and transparency, Table 4 provides a structured "evidence map" that links each focal variable to the corresponding study IDs that support it.

Table 4. Core variables and supporting studies (evidence map)

Variable	How it appears in the literature (typical role)	Evidence (Table 3 IDs)
Trust / Credibility	Core mediator linking exposure to downstream outcomes; shaped by realism, social cues, and disclosure	3, 8, 14, 15, 16, 22, 25, 26
Perceived authenticity	Mediator and/or interpretive condition; tension between "human vs. artificial" and "authentically fake" perceptions	2, 9, 18, 21, 22, 25, 26
Engagement	Intermediate outcome; captured as platform-level interaction metrics and/or psychological involvement	3, 13, 20, 23, 24, 25
Purchase intention	Primary outcome; frequently explained through trust/credibility, perceived authenticity, and engagement pathways	1, 3, 12, 14, 16, 22
Brand attitudes	Symbolic evaluative outcome; influenced by aesthetic/narrative congruence and value alignment (e.g., sustainability)	8, 12, 16, 21, 22

Source: Authors' own elaboration, 2026.

3.2.1. *Trust and credibility as structuring mechanisms*

Trust and source credibility emerge as structuring mechanisms because they help explain how exposure to a virtual influencer (VI) translates into behavioral outcomes such as engagement and purchase intention. Across the corpus, trust tends to be formed when consumers interpret the VI as displaying credible cues for example, message consistency, brand–endorser congruence, salient social cues, and an appropriate degree of human-likeness or realism.

Two recurring patterns stand out. First, several studies model credibility as an upstream driver of both engagement and purchase intention, treating credibility as a central pathway through which VIs influence consumer responses. Second, trust appears to be contingent on design and representational features: realism and visual presentation including gender presentation and stylistic variations such as human-like versus anime-like designs are repeatedly discussed as factors that can modulate trust and, in turn, downstream outcomes.

From a visual culture perspective, this finding is particularly consequential. It suggests that VI persuasion is not reducible to “visual appeal” alone; rather, it depends on culturally learned readings of visual and discursive signals that audiences treat as markers of reliability and legitimacy. Put differently, visuality operates as a semiotics of credibility, and this interpretive layer may outweigh purely aesthetic attributes in shaping consumer judgments.

Evidence (Table 3 IDs): 3, 8, 14, 15, 16, 22, 25, 26.

3.2.2. *Perceived authenticity and the “non-human” paradox*

Perceived authenticity is one of the most sensitive constructs in this research domain because virtual influencers (VIs) challenge the conventional assumption that authenticity is inherently human. The reviewed literature indicates that, in the VI context, authenticity operates less as an objective property and more as an interpretive accomplishment: consumers may recognize an influencer’s artificial nature and still experience attachment, acceptance, or message legitimacy, depending on conditions such as the VI’s stylistic design, disclosure practices, emotional storytelling, and the broader consumption setting.

Within the present corpus, authenticity is articulated at two complementary levels. First, authenticity is treated as an aesthetic–narrative experience: visual coherence of the character, stylistic continuity, narrative consistency, and controlled staging can support attributions of “functional” authenticity (i.e., authenticity that is convincing and meaningful, even if not grounded in human embodiment). Second, authenticity is approached as a cultural norm: acceptance depends on social expectations regarding transparency, sponsorship, and perceived agency essentially, “who is speaking” and under what commercial conditions. In this sense, disclosure functions not only as an ethical requirement but also as a normative and visual device that frames interpretation.

Empirically, the expanded corpus includes studies that explicitly theorize this tension through notions such as “authentically fake,” as well as studies that model perceived authenticity often alongside credibility as a mediating pathway linking influencer type to persuasive effectiveness.

Evidence (Table 3 IDs): 2, 9, 18, 21, 22, 25, 26.

3.2.3. *Engagement as an intermediate outcome and platform-visible response*

Engagement appears repeatedly in the reviewed literature given its centrality to digital marketing. It is treated both as an observable platform signal (e.g., likes, comments, views, and followership) and as a potential indicator of deeper psychological connection (e.g., involvement, identification, and parasocial interaction). Accordingly, the corpus approaches engagement through two complementary traditions. First, engagement is modeled as an intermediate outcome within persuasion pathways most commonly conceptualized as credibility/trust → engagement → purchase intention. Second, engagement is examined as a platform-level phenomenon, analyzed at the level of posts and content streams and linked to message features, posting characteristics, and disclosure practices.

To avoid conceptual slippage in the synthesis, this review treats platform-level interaction and psychological engagement as analytically distinct constructs. High interaction metrics may reflect attention, novelty, or even controversy without necessarily implying trust or purchase-relevant persuasion, whereas psychological engagement can function as a mediating mechanism even when visible interactions remain comparatively modest.

Evidence (Table 3 IDs): 3, 13, 20, 23, 24, 25.

3.2.4. Brand attitudes: symbolic evaluation and aesthetic congruence

Brand attitudes are consistently linked to the symbolic fit between the virtual influencer (VI) and the brand's visual and narrative identity. Across the corpus, this relationship becomes particularly salient when VIs are used in value-laden endorsements (e.g., sustainability-oriented messaging) and when the VI's design operates as an extension of the brand's imaginative universe its style, tone, and storytelling conventions.

This finding is especially consequential because it positions the VI as a form of embodied visual branding. In this view, the brand does not simply “use” a communication channel; rather, it integrates a visual artifact a designed character whose aesthetic coherence and normative alignment (notably transparency and disclosure) can strengthen or undermine symbolic brand equity. Consequently, brand attitudes are shaped not only by what is said, but also by how the VI is visually constructed and culturally read within platform contexts.

Evidence (Table 3 IDs): 8, 12, 16, 21, 22.

Objective 1 Synthesis

Overall, the corpus converges on a plausible though not exclusive explanatory model: VI cues and attributes (e.g., realism/human-likeness, anthropomorphism, social cues, textual cues, and disclosure) shape key mediating mechanisms (trust/credibility, perceived authenticity, and engagement), which are in turn associated with downstream outcomes (brand attitudes and purchase intention). This formulation reflects the dominant patterns reported across the field and is grounded in the structured extraction matrix used to track which studies operationalize each construct and test each link.

Evidence (Table 3 IDs): 3, 8, 12, 14, 16, 21, 22, 23, 24, 25, 26.

3.3. Results aligned with Objective 2: Dominant theoretical and methodological approaches

The second objective was to identify the theoretical frameworks and methodological approaches that structure research on virtual influencers and consumer behavior. Overall, the evidence indicates convergence around four major theoretical families, alongside meaningful methodological diversity across study designs, data sources, and analytical techniques. To enhance transparency and traceability, Table 5 summarizes the main theoretical perspectives and links each to the corresponding studies in the included corpus.

Table 5. Key theoretical frameworks and supporting evidence in the corpus.

Theoretical family	What it explains	Evidence (Table 3 IDs)
S-O-R / affective–cognitive frameworks (incl. PAD)	How VI- and message-level stimuli trigger internal states (cognitive/affective) and subsequent behaviors	6
Credibility / signal-based perspectives	How visual and textual cues, as well as disclosure practices, shape trust and persuasive effectiveness	8, 14, 22, 26
Parasociality / PSI / personification	Symbolic bonding with artificial agents, including identification and parasocial connection mechanisms	4, 23, 25
Ethics, transparency, and disclosure	Effects of revealing artificiality and/or sponsorship on perceptions and consumption-related responses	11, 15, 23, 24, 25, 26

Source: Authors' own elaboration, 2026.

3.3.1. Dominant theoretical approaches

(1) Stimulus–Organism–Response models and affective–cognitive frameworks.

Several studies conceptualize the virtual influencer (VI) as a stimulus (S) that activates internal organismic states (O) both cognitive and affective which subsequently shape behavioral responses (R). The explicit use of S-O-R and PAD within the corpus supports this perspective as a structured framework for linking visual and communicative stimuli to consumer judgments and actions, thereby offering a formal bridge between visuality and consumption-related outcomes.

Evidence (Table 3 IDs): 6.

(2) Anthropomorphism, realism, and the formation of credibility.

A second line of work emphasizes that perceived humanness and realism influence credibility-related evaluations, including trust. This perspective aligns closely with a visual culture lens: “designing the human” (face, expression, embodiment, aesthetic style, and presentation) becomes an interpreted

signaling mechanism through which audiences infer reliability and legitimacy. Comparative studies further highlight that credibility dynamics may differ across human versus virtual endorsers, depending on representational features and contextual cues.

Evidence (Table 3 IDs): 14, 22, 26 (comparisons human vs. virtual: 2, 9).

(3) Parasocial theories and symbolic bonding with artificial agents.

The corpus also foregrounds relational and psychosocial mechanisms that explain how consumers form symbolic ties with artificial agents. These include identification, automated parasociality, personification, and parasocial interaction/relationship (PSI/PSR) as pathways connecting the VI as a visual artifact to affective responses, credibility perceptions, and engagement-related outcomes. This line expands classic influencer marketing debates by treating the VI not simply as a message source but as a mediated social presence with which audiences can develop quasi-relational bonds.

Evidence (Table 3 IDs): 4, 23, 25.

(4) Ethics, disclosure, and transparency.

Finally, ethics emerges as a cross-cutting concern across the field, focusing on what happens when consumers do not clearly distinguish artificial identity and/or commercial relationships, and how disclosure as a normative and often visually encoded signal shapes trust, acceptance, and downstream reactions. This stream is particularly relevant to platform communication because disclosure practices operate at the intersection of governance (ethical/legal expectations) and visual framing (labels, cues, interface conventions).

Evidence (Table 3 IDs): 11, 15, 23, 24, 25, 26.

3.3.2. Predominant methodological approaches (without overclaiming)

Methodologically, the corpus draws on a heterogeneous set of research designs and data sources. First, it includes experiments and comparative designs, which are commonly used to estimate the effects of influencer type (human vs. virtual), stylistic variation, realism, and disclosure cues on consumer responses. Second, several studies employ surveys and structural modeling approaches (e.g., SEM/PLS-SEM) to examine relationships among credibility, engagement, commitment-related constructs, and downstream outcomes. Third, the corpus contains mixed-method studies that combine quantitative evidence with qualitative or interpretive components to compare perceptions, practices, and meaning-making around virtual influencers. Fourth, there is a growing stream of platform-based analytics including comment mining, sentiment analysis, and machine learning that examines the phenomenon at scale and links observed engagement to content characteristics and disclosure practices. Finally, the corpus also includes conceptual contributions that provide interpretive frameworks for understanding automated parasociality and personification.

Given the heterogeneity of designs and reporting practices, this section remains descriptive rather than frequency-based. More formal quantification of design prevalence would require a dedicated coding frame and explicit frequency computation across the extraction matrix.

Evidence (Table 3 IDs): 2, 3, 4, 6, 16, 22, 23, 24, 25, 26 (plus additional empirical studies: 1, 8, 12, 14, 15, 19).

3.4. Results aligned with Objective 3: Implications and future directions from digital marketing and visual culture

This objective integrates the review's findings to derive practical implications and outline a future research agenda through a dialogue between digital marketing and visual culture. The results are organized into four complementary lines.

3.4.1. Implications for brands and digital strategy

(a) Managing realism and style as trust-relevant signals.

The evidence suggests that realism and stylistic choices (e.g., human-like versus anime-like designs, as well as gender presentation) should not be treated as purely aesthetic decisions. Rather, they operate as consumer-interpreted signals that can either enhance credibility and trust or trigger skepticism. Strategically, this implies that brands need to calibrate the degree and type of human-likeness to the product category, audience expectations, and culturally situated norms of authenticity and legitimacy. Evidence (Table 3 IDs): 14, 22, 26.

(b) Disclosure and transparency as a visual–normative device.

The review indicates that transparency about artificial identity and sponsorship emerges as a consequential variable shaping parasocial mechanisms, credibility judgments, and consumer reaction. Disclosure is not merely a legal or ethical requirement; it also functions as a visual and interface-encoded cue (labels, platform conventions, graphic signals) that frames interpretation and meaning-making. Accordingly, disclosure practices should be approached as part of the visual rhetoric of persuasion, not as an afterthought to compliance. Evidence (Table 3 IDs): 23, 24, 25, 26

(c) Values-based segmentation and boundary conditions

The evidence further suggests that value-laden contexts particularly sustainability-oriented endorsements highlight that effectiveness may vary across audiences and settings. These studies suggest that strategic fit depends on consumers' value orientations (e.g., environmental identity and ethical sensitivity) and the congruence between the VI's persona, the brand's positioning, and the normative expectations attached to "green" claims. Evidence (Table 3 IDs): 8, 12, 16.

3.4.2. Implications for visual culture

(a) Virtual influencers as visual and cultural artifacts.

The review suggests that virtual influencers should be conceptualized as visual objects with distinctive grammars style, narrative, staging, character continuity, and stylization. Their persuasive capacity is inseparable from how audiences read and interpret these signals within platform cultures. This framing aligns with the journal's focus on how culture is manifested and interpreted through visual artifacts circulating in digital space. Evidence (Table 3 IDs): 21, 22, 24. In this sense, outcomes such as credibility, perceived authenticity, and even purchase intention should be understood not only as attitudinal responses, but also as effects of visual legibility produced through representation, stylization, and culturally recognizable markers of social presence.

(b) Reconfiguring "the human" and trust in images.

The findings show that the phenomenon offers a productive lens for examining how cultures negotiate what counts as "human" when presence is simulated and performative, and how empathy and trust are reworked when the source is artificial. The notion of "authentically fake" provides a language for conceptualizing this cultural pact: audiences may accept fabrication while still demanding legibility, coherence, and transparency. Evidence (Table 3 IDs): 21, 25, 26. What matters, therefore, is not literal human status, but the successful visual and narrative performance of recognizability, coherence, and symbolic credibility within digital culture.

Theoretical implications also emerge from the visual-culture lens adopted here. The findings suggest that consumer responses to virtual influencers are not shaped only by source effects or persuasive message characteristics, but also by representational conditions through which artificial personas become culturally legible and believable. Future research should therefore move beyond outcome-focused models and examine how realism, stylization, disclosure, identity performance, and platform-specific visual conventions structure persuasion in AI-mediated brand communication.

3.4.3. Research gaps and opportunities

(a) Contextual gap in Latin America.

The corpus is global but concentrated in settings where AI and digital marketing scholarship is most established, with a notable absence of studies explicitly centered on Latin American contexts. This gap motivates situated research that examines how social trust, digital literacy, cultural norms of authenticity, and platform use patterns shape the reception and effectiveness of VIs in the region. Evidence: Inference grounded in the composition of the included corpus (Table 3 IDs 1–26), which does not contain a Latin America focused empirical study.

(b) Standardization of constructs and measurement.

Heterogeneous operationalizations of authenticity, trust/credibility, engagement, and PSI constrain comparability and cumulative theory building. A priority for future work is to consolidate measurement practices and strengthen reporting consistency (e.g., convergent/discriminant validity in SEM-based studies), enabling more robust cross-study synthesis. Evidence (Table 3 IDs): 3, 16, 22, 25.

(c) Longitudinal dynamics and habituation.

Given the emergent nature of the phenomenon and the rapid evolution of platform norms, the field needs longitudinal evidence on how trust and credibility evolve over time such as habituation to artificiality, fatigue effects, normalization of disclosure conventions, and shifts in parasocial bonding with artificial agents.

Evidence: Derived from the recency and growth trajectory of the corpus, and from the centrality of disclosure/PSI mechanisms in the evidence base (23, 25).

3.4.4. Recommended methodological agenda

To strengthen both methodological rigor, future research would benefit from:

1. Replicable protocols (protocol registration where feasible, full data extraction, and explicit quality appraisal);
2. Clear separation of bibliometric mapping versus included-corpus synthesis, to prevent internal inconsistencies in reporting; and
3. Integrated “visual + behavioral” designs, combining visual analysis (semiotics, aesthetics, narrative, interface cues) with causal/structural methods (experiments, SEM/PLS-SEM) to explain *how* visual form produces consumption-related effects.

Evidence (Table 3 IDs): 22, 24, 25

4. Conclusions

4.1. Conclusions aligned with Objective 1 (core variables)

This review suggests that scholarship on virtual influencers and consumer behavior is commonly organized around five constructs: trust/credibility, perceived authenticity, engagement, purchase intention, and brand attitudes. Across the corpus, these variables are typically connected through mediation-like logics in which VI cues (e.g., realism/human-likeness, social and textual cues, disclosure practices, and aesthetic coherence) are translated into consumer judgments (credibility, authenticity, and trust), which then manifest as engagement and downstream outcomes (purchase intention and brand attitudes). The evidentiary base is particularly robust in studies that explicitly model authenticity and credibility as mediators and in research that treats disclosure as a determinant of both relational bonding and credibility formation.

Evidence (Table 3 IDs): 3, 8, 12, 14, 16, 21, 22, 23, 24, 25, 26.

4.2. Conclusions aligned with Objective 2 (theoretical and methodological approaches)

Theoretically, the corpus converges on four interrelated axes: (1) stimulus–organism–response and affective–cognitive frameworks, (2) credibility/signal-based perspectives emphasizing realism and cue processing, (3) parasociality/PSI and personification-based approaches to symbolic bonding, and (4) ethics, transparency, and disclosure as governance-relevant determinants of perception and response.

Methodologically, the evidence is produced through complementary approaches, including experiments (comparisons of influencer types and representational styles), surveys and SEM/PLS-SEM models (linking credibility, engagement, and outcomes), mixed-method designs (integrating interpretive and quantitative components), and platform-level analytics and machine learning (capturing engagement at scale). Given this methodological pluralism, the field would benefit from more standardized reporting and systematic design coding to strengthen comparability across studies and support cumulative synthesis.

Evidence (Table 3 IDs): 4, 6, 14, 16, 22, 23, 24, 25, 26 (additional outcome-focused empirical studies: 1, 3, 8, 12).

4.3. Conclusions aligned with Objective 3 (implications and future directions from digital marketing and visual culture)

The review’s central contribution to the digital marketing–visual culture dialogue is that virtual influencers can be conceptualized as persuasive visual artifacts: their effectiveness depends on how design and narrative are rendered into culturally legible signals of trust, credibility, and authenticity. The notion of “authentically fake,” together with evidence on disclosure and parasocial mechanisms, indicates that consumers evaluate not only the message content but also the visual–normative regime

that frames the message as legitimate or suspicious. Consequently, effective VI management requires simultaneous attention to visual decisions (style, human-likeness, aesthetic coherence, representational choices) and normative decisions (disclosure and transparency practices).

Looking forward, this SLR supports a research agenda that prioritizes: (1) situated empirical work in Latin America, (2) measurement standardization for authenticity/credibility/PSI/engagement, (3) longitudinal designs addressing habituation, fatigue, and evolving disclosure norms, and (4) integrated methodologies combining visual analysis (semiotic–narrative and interface-focused) with behavioral measurement (experiments, SEM/PLS-SEM) to clarify mechanisms. Evidence (Table 3 IDs): 21, 22, 23, 24, 25, 26 (boundary conditions: 8, 12, 16; realism/visuality: 14).

More specifically, the contribution of this review lies in showing that the consumer effects of virtual influencers cannot be reduced to endorsement efficiency or source-related evaluations alone. Across the included studies, responses such as trust, perceived authenticity, engagement, and purchase intention are repeatedly shaped by how artificial personas are visually constructed, narratively stabilized, and culturally interpreted. By bringing together digital marketing and visual culture, this review offers a more precise account of how visual form, symbolic coding, and platform-based representation help generate the very outcomes that prior research has often analyzed only at the behavioral or attitudinal level.

4.4. Limitations (PRISMA-aligned)

1. Database coverage and disciplinary bias. Limiting the search to Scopus and Web of Science may under-represent specialized literatures (e.g., communication studies, and visual culture research).
2. Language bias. Restricting inclusion to English and Spanish may exclude relevant evidence published in other languages.
3. Methodological heterogeneity. Variation in designs and operationalizations constrains direct comparability and limits the feasibility of meta-analytic synthesis.
4. PRISMA traceability and supporting materials. To strengthen auditability, this review reports a PRISMA 2020 flow with counts (Figure 1), a table of full-text exclusion reasons (Table 2), and provides reproducibility materials in supplementary appendices (search strategies with hits by database/query block; non-retrieval reasons; extraction template; MMAT item-level appraisals; and a theme-by-study evidence matrix). Nonetheless, a non-trivial share of potentially eligible reports could not be retrieved, and while we assessed the risk of clustering by metadata, non-retrieval may still under-represent specific subthemes or outlets.

4.5. Closing statement

In sum, this systematic review shows that virtual influencers represent an emergent phenomenon in which persuasion is constructed at the intersection of visual design, transparency norms, psychosocial mechanisms (credibility and parasocial bonding), and market-relevant outcomes. While the field is expanding and becoming theoretically and methodologically more sophisticated, it also requires: (1) stronger measurement and reporting standardization, (2) more situated evidence in under-represented contexts such as Latin America, and (3) a more explicit integration of visual culture approaches with behavioral measurement to explain how visual artifacts transform brand–consumer–organization relationships.

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