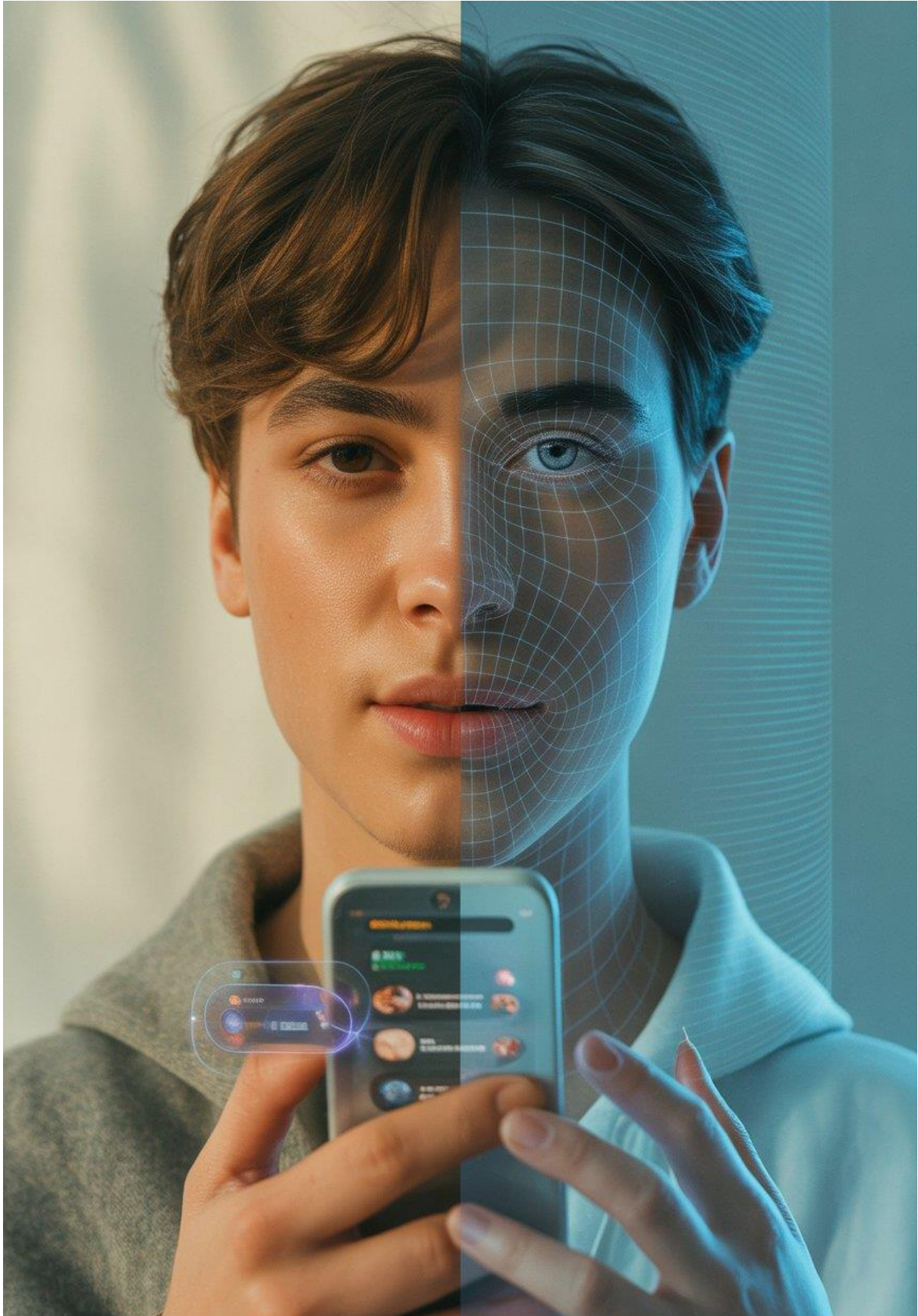




ทัศนคติของผู้บริโภคเจนซีต่ออินฟลูเอนเซอร์เอไอ เปรียบเทียบกับอินฟลูเอนเซอร์มนุษย์: การสำรวจความถ่องแท้ ความน่าเชื่อถือและปฏิสัมพันธ์ แบบพาราโซเชียล

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บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์เพื่อสำรวจทัศนคติที่กลุ่มเจนซี (Gen Z) ประเมินอินฟลูเอนเซอร์ที่เป็นปัญญาประดิษฐ์ หรือเอไอ (“เสมือนจริง”) เปรียบเทียบกับอินฟลูเอนเซอร์ที่เป็นมนุษย์ ภายใต้สามกรอบแนวคิดหลัก ได้แก่ ความถ่องแท้ (Perceived Authenticity), ความน่าเชื่อถือ (Trustworthiness) และ ปฏิสัมพันธ์แบบพาราโซเชียล (Parasocial Interaction: PSI) โดยใช้การเก็บข้อมูลเชิงสำรวจแบบภาคตัดขวาง (Cross-Sectional, Within-Subject Survey) กับผู้ใช้โซเชียลมีเดียกลุ่มเจนซี (จำนวน 100 คน; ช่วงอายุ 18–27 ปี) ที่ได้จากการคัดเลือกแบบเจาะจง (Purposive Sampling) ผู้ตอบแบบสอบถามได้รับชมตัวอย่างโปรไฟล์และโพสต์ของอินฟลูเอนเซอร์ที่เป็นมนุษย์และเอไอ จากนั้นได้ทำการประเมินผ่านแบบสอบถามที่ผ่านการตรวจสอบค่าความเที่ยงตรง และมีค่าความเชื่อมั่นสูง ($\alpha \approx 0.90-0.96$)

ผลการทดสอบ paired-samples t-test พบว่าอินฟลูเอนเซอร์ที่เป็นมนุษย์ได้รับการประเมินสูงกว่าอย่างมีนัยสำคัญทางสถิติเมื่อเทียบกับอินฟลูเอนเซอร์ที่เป็นเอไอในทุกมิติ ได้แก่ ความถ่อมแท้, ความน่าเชื่อถือ และ ปฏิสัมพันธ์แบบพาราโซเซียล ($p < .001$ ทั้งหมด) อีกทั้งการวิเคราะห์ความแปรปรวนร่วม (ANCOVA) ยืนยันว่าความแตกต่างดังกล่าวยังคงมีนัยสำคัญทางสถิติภายหลังการควบคุมตัวแปรร่วม “ความคุ้นเคย” ต่ออินฟลูเอนเซอร์แต่ละประเภท (ค่า $p < .001$ ทั้งหมด, $\eta^2 = 0.13-0.15$) ผลการวิเคราะห์ชี้ให้เห็นว่าช่องว่างระหว่างอินฟลูเอนเซอร์มนุษย์กับอินฟลูเอนเซอร์เอไอสะท้อนถึงความแตกต่างเชิงการรับรู้อย่างแท้จริงมากกว่าจะเป็นผลจากระดับการเปิดรับหรือประสบการณ์เดิมของผู้ตอบแบบสอบถาม นอกจากนี้การวิเคราะห์สหสัมพันธ์เพียร์สัน (Pearson correlation) ภายในอินฟลูเอนเซอร์ที่เป็นเอไอ แสดงให้เห็นถึงความสัมพันธ์เชิงบวกอย่างมากระหว่างความถ่อมแท้กับความน่าเชื่อถือ ($r = 0.741$) และระหว่างปฏิสัมพันธ์แบบพาราโซเซียลกับความน่าเชื่อถือ ($r = 0.669$) อีกทั้งยังพบความสัมพันธ์ในระดับปานกลางระหว่างความถ่อมแท้กับปฏิสัมพันธ์แบบพาราโซเซียล ($r = 0.595$) ในส่วนของผลการวิเคราะห์ถดถอยพหุคูณ (Multiple Regression) ชี้ให้เห็นว่าความถ่อมแท้ ($\beta = 0.531, p < .001$) และปฏิสัมพันธ์แบบพาราโซเซียล ($\beta = 0.353, p < .001$) เป็นตัวทำนายความน่าเชื่อถือของอินฟลูเอนเซอร์ที่เป็นเอไอพร้อมกัน ($R^2 = 0.63$) ซึ่งสะท้อนถึงกลไกทั้งด้านความน่าเชื่อถือและด้านความสัมพันธ์ที่ทำงานเสริมกัน

อย่างไรก็ตาม การตีความผลลัพธ์ทางงานวิจัยยังมีข้อจำกัด ได้แก่ การสุ่มตัวอย่างโดยไม่ใช้ความน่าจะเป็น (Non-Probability Sampling), ข้อมูลแบบภาคตัดขวางจากการรายงานตนเอง, ความเอนเอียงที่อาจเกิดจากวิธีการวัด (Common-Method Bias), ความไม่สมดุลในการรับสื่อที่อาจเอื้อประโยชน์ต่ออินฟลูเอนเซอร์ที่เป็นมนุษย์ และการขาดการทดสอบความคงรูปของโครงสร้าง (Factor Invariance) หรือการออกแบบการทดลอง (เช่น กรอบการเปิดเผยข้อมูล, ระดับความคล้ายมนุษย์, ประเภทสินค้า)

ผลการวิจัยนี้มีส่วนช่วยสร้างภาพเปรียบเทียบที่มีความถูกต้องเชิงโครงสร้างต่อการตอบสนองของเจนซีต่ออินฟลูเอนเซอร์ที่เป็นเอไอ และช่วยอธิบายเงื่อนไขที่เอื้อต่อการสร้างความน่าเชื่อถือของอินฟลูเอนเซอร์ที่เป็นเอไอในเชิงการจัดการ ผลการวิจัยบ่งชี้ว่าอินฟลูเอนเซอร์ที่เป็นเอไอควรได้รับการวางตำแหน่งให้เป็นส่วนเสริม (Complement) มากกว่าที่จะเป็นตัวทดแทน (Substitute) ของอินฟลูเอนเซอร์ที่เป็นมนุษย์ โดยเฉพาะเมื่อวัตถุประสงค์หลักคือการสร้างความน่าเชื่อถือและความสัมพันธ์ที่ลึกซึ้งกับผู้ติดตาม

คำสำคัญ: เอไอ ปัญญาประดิษฐ์ อินฟลูเอนเซอร์ เจนซี

Gen Z Consumers' Attitudes Toward AI Influencers vs. Human Influencers: Exploring Authenticity, Trustworthiness, and Parasocial Interaction

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ABSTRACT

This study examines how Generation Z (Gen Z) evaluates AI-generated (“virtual”) influencers relative to human influencers across three established constructs: perceived authenticity, trustworthiness, and parasocial interaction (PSI). Using a cross-sectional, within-subject survey of Gen Z social media users ($N = 100$; ages 18–27) recruited via purposive sampling, respondents viewed examples of profiles and posts made by human and AI influencers and completed validated multi-item scales ($\alpha \approx 0.90\text{--}0.96$).

Paired-samples *t*-tests revealed significantly higher observed ratings for human influencers than AI influencers on authenticity, trustworthiness, and PSI (all $ps < .001$). ANCOVA analyses confirmed these differences remained significant after controlling for prior familiarity with each influencer type (all $ps < .001$, $\eta^2 = 0.13\text{--}0.15$), indicating the human-AI gap reflects genuine perceptual differences rather than exposure effects. Within the AI subset, Pearson

correlations indicated strong positive associations between authenticity and trust ($r = 0.741$) and between PSI and trust ($r = 0.669$), with authenticity and PSI also moderately correlated ($r = 0.595$). Multiple regression identified authenticity ($\beta = 0.531$, $p < .001$) and PSI ($\beta = 0.353$, $p < .001$) as concurrent predictors of trust in AI influencers ($R^2 = 0.63$), suggesting complementary credibility and relational pathways.

Interpretation is bounded by non-probability sampling, cross-sectional self-report data, potential common-method bias, exposure asymmetries favoring human influencers, and the absence of factor-invariance tests or experimental manipulations (e.g., disclosure frames, degree of human-likeness, product category).

The findings contribute a comparative, construct-valid portrait of Gen Z responses to synthetic sources and clarify conditions under which AI influencers may earn trust. Managerially, results imply that virtual influencers are best positioned as complements to, rather than substitutes for, human creators when trust and relational depth are central objectives.

Keywords: AI, Artificial Intelligence, Influencers, Gen Z

1. INTRODUCTION

1.1 Background and Context

The rapid integration of Artificial Intelligence (AI) into digital ecosystems has catalyzed profound shifts in communication, identity construction, and brand engagement. A striking development of AI in social media marketing is the emergence of AI-generated influencers. Unlike traditional influencers who build audiences through lived experiences (Joshi et al., 2025), AI influencers are created through collaborative efforts between designers, programmers, and marketers, using technologies such as machine learning, 3D modeling, and natural language generation (Mrad et al., 2022). These computer-created personas are therefore designed to mimic human traits, lifestyles, and social interactions (Mrad et al., 2022).

Today, these virtual influencers have gained substantial traction. Notable examples like Lil Miquela and Shudu have garnered millions of followers and collaborated with high-end fashion brands and technology companies. Their appeal lies in their flawless aesthetics, consistent availability, and controlled branding-offering companies an efficient and low-risk platform for outreach (Ju et al., 2024). Despite their synthetic origins, these personas integrate seamlessly into influencer ecosystems, often indistinguishable from their human counterparts.

However, this development raises fundamental questions about the nature of influence, authenticity, and emotional resonance in an age increasingly defined by algorithmic mediation. As media literacy increases, audiences are re-evaluating notions of influencer authenticity and the potential for virtual agents to form genuine connections.

1.2 Problem Statement

AI influencers are becoming increasingly visible across platforms such as Instagram, TikTok, and YouTube-yet a critical gap remains in scholarly understanding of how consumers, particularly young digital natives, interpret and engage with these non-human entities. Much of the existing literature focuses on human influencers or celebrity endorsements, offering limited insight on how virtual influencers are perceived in terms of credibility, emotional relatability, and persuasive power.

This research seeks to address this gap by focusing on Generation Z (Gen Z), individuals born between 1998 – 2007, who represent the first generation to grow up in a fully digital world (Jayatissa, 2023). Known for their skepticism towards inauthentic content and their demand for transparency and social accountability, Gen Z's attitudes toward AI influencers may differ fundamentally from those of older generations. As Gen Z have surpassed Millennials as the largest generational cohort, comprising one-third of the global population (Chen et al., 2022), understanding their perceptions is essential for marketers, content creators, and scholars aiming to navigate the shifting dynamics of influence in AI-mediated contexts.

1.3 Research Objectives

The primary objective of this research is to systematically compare Gen Z's perceptions of AI-generated influencers and human influencers across key psychological and marketing dimensions. Specifically, the study aims to:

- To investigate Gen Z's perceptions of authenticity in AI influencers in comparison to human influencers.
- To examine the extent to which Gen Z trusts AI influencers relative to human influencers.
- To assess the degree of emotional or parasocial interaction Gen Z feels toward AI influencers versus human influencers.
- To explore the influence of perceived authenticity and parasocial interaction on the level of trust Gen Z places in AI influencers.

By integrating these dimensions, the study aims to offer a comprehensive psychological and behavioral profile of Gen Z's interaction with AI influencers.

1.4 Research Questions

To guide the empirical inquiry, the study poses the following research questions:

- Do Gen Z people perceive AI influencers as authentic or genuine in comparison to human influencers?
- Do Gen Z people trust AI influencers more or less than human influencers?
- Do Gen Z people feel connected to AI influencers the same way they do with human influencers?

- What is the relationship between perceived authenticity, trustworthiness, and parasocial interaction in AI influencers among Gen Z?

These questions seek to elucidate behavioral outcomes as well as the psychological mechanisms underpinning consumer-influencer dynamics in AI-enhanced environments.

2. LITERATURE REVIEW

2.1 Evolution of Influencer Marketing

Influencer marketing has evolved dramatically over the past two decades, transitioning from traditional celebrity endorsements to a diverse ecosystem that encompasses nano-, micro-, macro-, mega-, and now virtual influencers. Initially, influencer marketing was confined to celebrity endorsements, which were primarily leveraged for their broad reach and symbolic association with fame and prestige. However, the rapid and widespread adoption of modern social media platforms enabled ordinary individuals to become influential content creators, giving rise to what researchers call “relatable microcelebrities” (Abidin, 2016).

This shift has redefined consumer-brand relationships by positioning influencers as peer-like figures rather than distant celebrities. Audiences increasingly gravitate towards influencers who convey authenticity, share personal narratives, and engage in two-way communication (De Veirman et al., 2017). These traits are particularly effective in fostering parasocial intimacy, which has been shown to enhance brand loyalty and purchase intent (Sokolova & Kefi, 2020; Lou & Kim, 2019). In over-saturated media environments, where advertising clutter and selective attention limit consumer responsiveness, traditional advertising often struggles to make an impact (Subramanian, 2015; Teixeira, 2014). Influencers, however, can overcome these cognitive barriers by offering perceived authenticity, emotional relatability, and credibility.

As the influencer model continues to evolve, a new development has emerged: the rise of AI-generated influencers. This shift challenges foundational assumptions about authenticity and connection in influencer marketing. Unlike their human counterparts, these virtual personas are not bound by physical limitations, aging, or personal controversies-factors

that often complicate influencer-brand partnerships. However, their synthetic nature introduces questions about whether they can replicate the emotional and relational aspects that make human influencers effective.

2.2 Emergence of AI Influencers

AI influencers are digital constructs created using a mix of advanced technologies, including 3D rendering, motion capture, neural networks, and natural language processing (NLP). These virtual personas are constructed to reflect idealized human traits, such as beauty and charisma, while functioning as controllable media artefacts that allow brands to manage narrative consistency and avoid the unpredictability of human influencers. Unlike human influencers, AI influencers never go off-message, never age, and never post unsanctioned content (Gulan et al., 2025).

Prominent virtual influencers such as Lil Miquela (created by Brud) and Shudu (created by digital artist Cameron-James Wilson) have partnered with global brands such as Calvin Klein, Balmain, and Samsung. Their rise has been driven by a blend of visual sophistication and storytelling, often integrating fictional backstories, activism, and fashion-forward aesthetics.

Despite their commercial success, these entities tread a complex psychological and ethical terrain. The Uncanny Valley theory suggests that as artificial entities become increasingly human-like, subtle imperfections, such as unnatural expressions, can evoke discomfort by emphasizing their synthetic nature (Mori, 1970). This is often subconsciously perceived as a lack of genuine emotion, even if the response stems more from perceptual dissonance than an actual emotional absence. AI influencers occupy this liminal space between realism and artificiality, generating simultaneous fascination and skepticism.

Some scholars argue that the aesthetic perfection and brand compliance of AI influencers may come at the cost of emotional credibility (Djafarova & Trofimenko, 2019). Others see them as a technological extension of branding logic, designed to maximize control and minimize reputational risk (Marwick, 2013). These differing perspectives frame the central question: Can AI influencers replicate or replace the relational and affective dimensions of influence traditionally grounded in human experience?

2.3 Gen Z: Characteristics and Digital Preferences

Gen Z represents the first cohort raised in an ecosystem of ubiquitous digital technology. They possess high digital literacy, a critical awareness of marketing tactics, and a preference for transparency, personalization, and social responsibility (Turner, 2015). Their media consumption is fast-paced, visual-first, and heavily influenced by peer validation and algorithmic feeds, making them “digital natives” whose assumptions about identity, content creation, and information systems differ structurally from older generations (Fu et al., 2024).

Beyond general digital literacy, Gen Z's relationship with digital identity is fundamentally performative and context-dependent. Research indicates that 56% of Gen Z maintain what they describe as a "double life," constructing idealized online personas that differ substantially from their offline selves (Olsen Kullenberg, 2025). This phenomenon extends to multi-account strategies, where individuals create separate "Finsta" (fake Instagram) accounts to express their "true selves" when primary accounts feel overly curated or unsatisfying (Darr, 2022). Such practices reflect not vanity but sophisticated identity work—what scholars term "collectively performed narcissism" that serves cohesion-building functions within peer networks (Olsen Kullenberg, 2025). This lived experience with identity performance positions Gen Z as uniquely capable evaluators of influencer authenticity, whether human (who also curate personas) or AI-generated (whose identities are entirely constructed). This evaluative sophistication manifests in their preference for relatable, candid influencers who demonstrate value alignment on issues like diversity, sustainability, and mental health, often rejecting content perceived as "overly polished" or "corporate" (Tirocchi, 2024; Baghel, 2023).

Equally important is Gen Z's fluency with synthetic media. Unlike older cohorts encountering AI-generated content as a novelty, Gen Z has developed through daily exposure to filters, deepfakes, and algorithmically enhanced content-navigating what UNESCO (2025) terms an epistemic crisis where "seeing and hearing are no longer believing." Recent research documents that Gen Z encounters deepfake content serendipitously through everyday platform use and has developed unique verification strategies in response (Lao et al., 2025). This exposure is accelerating: the number of deepfakes online increased tenfold between 2022 and 2023 alone (Center for News, Technology & Innovation, 2025). While only 42% of Americans overall can recognize synthetic images (Powell et al., 2025), Gen Z's continuous

immersion in digitally manipulated environments equips them with heightened sensitivity to authenticity cues at the boundary between real and artificial- precisely the domain AI influencers occupy.

Finally, Gen Z demonstrates disproportionately high skepticism toward AI systems and algorithmic mediation. Sixty-two percent of Gen Z express skepticism toward AI- a higher rate than any other generation- particularly regarding privacy concerns, online authenticity, and the potential for algorithmic exploitation (Artificial Intelligence+, 2025). This stance reflects not technophobia but what researchers characterize as "digital literacy in ethics": an awareness that power is embedded in algorithms and a demand for accountability in how that power is exercised (quoted in Artificial Intelligence+, 2025). Gen Z treats AI ethics as "immediate, identity-defining, and inseparable from digital life" (Usercentrics, 2025, para. 3), with 41% reporting that AI makes them anxious and 30% stating that brand adoption of AI decreases their trust (Morning Consult, 2025). This heightened algorithmic skepticism means Gen Z approaches AI influencers not uncritically but through evaluative frameworks developed by navigating years of algorithmically curated feeds, targeted advertising, and platform manipulation.

As a result, AI influencers, no matter how lifelike, may face difficulty building deep emotional resonance with a cohort that prizes genuineness over perfection. Understanding how Gen Z reconciles this tension- between their fluency with synthetic media and their demand for authentic connection- is central to assessing the long-term viability of AI influencers in marketing contexts.

2.4 Authenticity in Influencer Marketing

Authenticity, encompassing self-disclosure, value alignment, consistency, and perceived sincerity (Audrezet et al., 2020), has become a cornerstone of effective influencer marketing. "Authentic influencers" are seen as trustworthy because they appear to act independently of brand agendas, even when promoting sponsored content.

Traditionally, influencers communicate authenticity through behind-the-scenes content, emotional vulnerability, or visible imperfections. These demonstrations tend to humanize them and foster deeper parasocial bonds (van Driel & Dumitrica, 2020). AI influencers, however, challenge the very notion of authenticity. While they can simulate

transparency and even self-reflective content (e.g., discussing their artificial nature), they lack the “lived experience” that often underpins authentic narratives.

This tension raises fundamental questions: Can programmed personas truly be seen as authentic? Or is synthetic authenticity, a meticulously designed semblance of realness, a distinct category that functions differently in consumer perception? Existing research suggests that disclosure of AI identity may mitigate discomfort, but emotional trust remains difficult to build without genuine spontaneity or vulnerability (Tsumura & Yamada, 2023).

2.5 Parasocial Relationships

Parasocial relationships (PSRs) refer to the one-sided emotional bonds individuals form with media figures (Horton & Wohl, 1956). These relationships are now central to understanding influencer impact, particularly in online environments where followers often perceive influencers as friends, role models, or confidants.

Strong PSRs enhance engagement, loyalty, and purchase behavior (Jin et al., 2014). Influencer-consumer bonds are often strengthened through posting personal updates, responding to comments, and sharing real-life struggles. However, the artificiality of AI influencers may limit their capacity to create and strengthen these bonds. Despite being programmed to mimic interactive behaviors (e.g., responding to comments or posting "candid" stories), their lack of emotional agency may be perceived as a barrier to genuine connection.

Researchers argue that parasocial bonding depends not only on interactivity but also on perceived emotional authenticity, an area where AI influencers often fall short. However, recent work suggests that under specific conditions, such as within collectivist cultures, AI influencers can foster parasocial bonds comparable to those of their human counterparts, particularly when perceived as consistent, responsive, and socially engaged (Omeish et al., 2025). This divergence in findings reflects an ongoing debate in the academic literature, highlighting the complexity of defining authenticity and emotional connection in synthetic media. Understanding these differences is crucial for assessing the strategic value of AI influencers across various campaign types.

2.6 AI and Consumer Trust

Trust has been established as a critical mediator in consumer behavior (Karunasingha & Abeysekera, 2022), particularly in social media contexts where social motivation influences purchase decisions through the intermediary of trust. According to the research, trust in technology is shaped by perceived humanness, transparency, and functionality (Glikson & Woolley, 2020). In influencer marketing, trust is traditionally earned through consistency, honesty, and personal relatability (Lankton et al., 2015). For AI influencers, trust must be constructed through other means such as brand endorsement history, design transparency, or novelty appeal. Recent findings suggest that specific visual cues, such as including human companions in images, can increase the perceived humanness and trustworthiness of virtual influencers, thereby enhancing audience engagement (Rizzo et al., 2023). These strategies highlight how trust in synthetic agents can be engineered through presentation, even in the absence of emotional or experiential authenticity.

Muniz et al. (2023) found that when consumers are informed that an influencer is AI-generated, trust levels can decline unless clear disclosures and consistent behavior are present. Moreover, ethical concerns arise around manipulation, undisclosed automation, and identity deception, especially when AI influencers are portrayed in ways that obscure their synthetic nature.

The question, therefore, is not just whether consumers trust AI influencers, but under what conditions that trust is formed, sustained, or eroded. Understanding how transparency, technological literacy, and visual design interact to shape trust perceptions is essential for responsible and effective AI-influencer integration.

2.7 Theoretical Framework: Dual-Path Model of Trust

The preceding sections establish that authenticity, parasocial interaction (PSI), and trust are key constructs in influencer effectiveness, yet their interrelationships remain underspecified for AI influencers. This study proposes a dual-path model integrating source credibility theory (Ohanian, 1990) and PSI theory (Horton & Wohl, 1956): trust in AI influencers should be predicted by both a credibility route (authenticity → trust) and a relational route (PSI → trust), operating additively.

The model posits two complementary pathways:

Path 1 (Credibility Route): Perceived authenticity → Trust. Audiences evaluate AI influencers' consistency, transparency, and value alignment to infer credibility, which directly predicts trust.

Path 2 (Relational Route): Parasocial interaction → Trust. Audiences who develop emotional closeness and perceived reciprocity with AI influencers should report higher trust, independent of credibility judgments.

These pathways are theorized to operate additively: authenticity addresses a cognitive evaluation ("Is this source credible?"), while PSI addresses an affective bond ("Do I feel connected?"). Each should make unique contributions to trust, even when controlling for the other. This integration extends prior work by explicitly modelling how credibility-based and relationship-based mechanisms function in concert for non-human personas.

Given the structural constraints facing AI influencers—limited spontaneity, vulnerability, and perceived humanness—we expect them to score lower than human influencers on both predictors and on trust itself. However, the dual-path framework predicts that within the AI context, authenticity and PSI should remain distinct, measurable, and jointly predictive of trust.

The framework generates two research propositions:

P1 (Dual-Path): Perceived authenticity and PSI will additively predict trust in AI influencers among Gen Z.

P2 (Deficit): AI influencers will score lower than human influencers on authenticity, PSI, and trust.

2.8 Operationalization and Measurement

To test these propositions, the study employs well-established, psychometrically validated scales that operationalize each construct in ways consistent with the theoretical framework.

Perceived Authenticity. Authenticity is measured using scales adapted from marketing research that captures the dimensions of genuineness, transparency, and value alignment identified in Section 2.4. Studies by Audrezet et al. (2020) provide validated items assessing whether influencers are perceived as authentic, sincere, and true to their values.

These scales have demonstrated strong reliability ($\alpha > 0.85$) across multiple contexts and are appropriate for evaluating both human and AI influencers.

Parasocial Interaction. PSI is measured using the Parasocial Interaction Scale originally developed by Rubin et al. (1985) and adapted for the context of this study. This scale captures the one-sided sense of intimacy, understanding, and emotional connection audiences feel toward media figures (Section 2.5). Contemporary applications in influencer research (e.g., Lou & Kim, 2019; Sokolova & Kefi, 2020) confirm its validity for social media personas, with items assessing dimensions such as perceived friendship, emotional investment, and conversational reciprocity.

Trust/Credibility. Trustworthiness is operationalized using Ohanian's (1990) source credibility scale, specifically the trustworthiness dimension. This widely adopted scale measures perceptions of dependability, honesty, reliability, sincerity, and trustworthiness-core facets of the credibility route in the dual-path model. Ohanian's scale has been extensively validated in endorsement contexts and remains the dominant operationalization in influencer marketing studies (Section 2.6). The scale's established psychometric properties ($\alpha > 0.90$) and theoretical grounding make it appropriate for comparing trust perceptions across human and AI influencers.

By employing these established measures, the study ensures construct validity and comparability with prior influencer research.

3. METHODOLOGY

3.1 Research Design

This study employs a quantitative research design to examine how Gen Z perceives AI influencers compared to human influencers in terms of authenticity, trustworthiness, and parasocial interaction. The decision to use a quantitative approach is grounded in the objective of measuring and analyzing observable variables through structured instruments, allowing for statistical generalization across a defined population.

Quantitative methods are particularly effective for research questions that seek to measure attitudes, beliefs, and perceptions across a broad group (Carrasco & Lucas, 2016). This study aims to evaluate Gen Z's attitudes toward AI influencers and human influencers

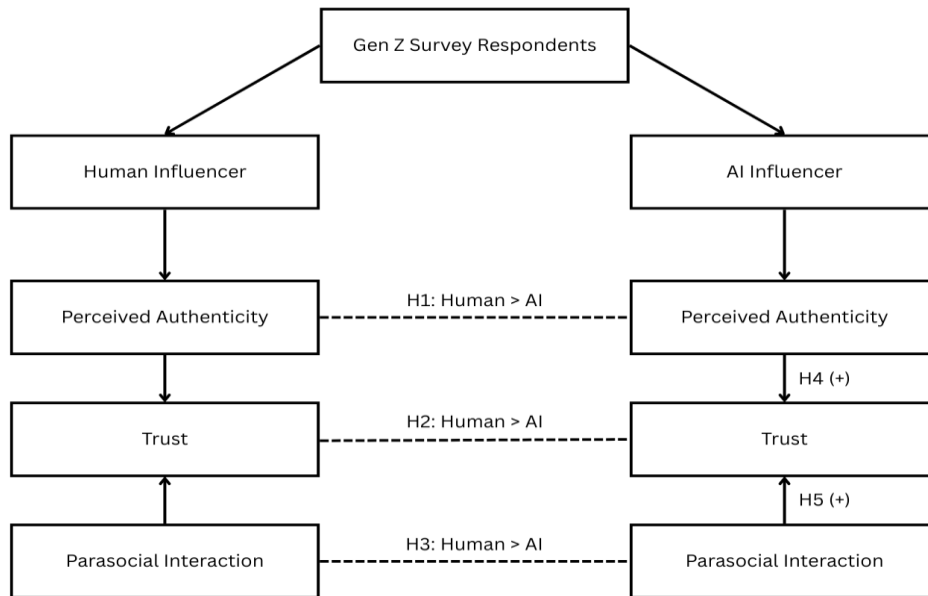
using structured questionnaires that produce data amenable to descriptive and inferential statistical analysis. By capturing numerical responses from a large sample, the study ensures both breadth of insight and generalizability, which are essential given the novelty of AI influencers and the diversity within the Gen Z cohort.

The research is also cross-sectional-it will be collected at a single point in time, rather than longitudinally. This design choice aligns with the study's objective to provide a snapshot of current perceptions and behavioral intentions in the context of evolving digital influencer trends.

3.2 Research Questions and Hypotheses

To operationalize the dual-path framework articulated in section 2.7, the quantitative study is driven by four central research questions and corresponding hypotheses designed to be tested using survey data:

- RQ1: Do Gen Z people perceive AI influencers as authentic or genuine in comparison to human influencers?
 - H1: Gen Z thinks human influencers are more authentic than AI influencers.
- RQ2: Do Gen Z people trust AI influencers more or less than human influencers?
 - H2: Gen Z trusts human influencers more than AI influencers.
- RQ3: Do Gen Z people feel connected to AI influencers the same way they do with human influencers?
 - H3: Gen Z feels more connected to human influencers than AI influencers.
- RQ4: What is the relationship between perceived authenticity, trustworthiness, and parasocial interaction in AI influencers among Gen Z?
 - H4: If Gen Z thinks AI influencers are authentic, they will trust them more.
 - H5: If Gen Z feels connected to AI influencers, they will trust them more.



3.3 Target Population and Sampling Method

The target population for this study is Gen Z individuals aged 18 to 27 who are active users of social media platforms such as Instagram, TikTok, and YouTube. This age group was selected based on demographic definitions of Gen Z and their established patterns of influencer consumption.

A non-probability purposive sampling method was utilized. Participants were recruited based on their relevance to the research objective rather than random selection. The sample was drawn from online university networks, student forums, and Instagram and TikTok communities and Gen Z users are highly active. This purposive approach is justified by the need to ensure respondents have direct experience with digital influencers, particularly AI influencers, which remain a niche yet growing category.

The sample consisted of 100 valid responses, which meets the threshold for statistical analysis, particularly for parametric tests such as t-tests and regression (Field, 2013).

3.4 Data Collection Procedure

Data was collected using a self-administered online survey distributed via Google Forms. The online format was chosen for its efficiency, accessibility, and alignment with the digital habits of Gen Z, who are accustomed to mobile and web-based interfaces.

The survey instrument was designed following established scale-development procedures and included both validated scales and researcher-developed items tailored to the AI influencer context. Before distribution, the survey was pilot tested with 10 Gen Z users to assess clarity, reliability, and completion time. Based on their feedback, minor adjustments were made to question wording and scale presentation.

Respondents were provided with brief visual and textual examples of both human influencers and AI influencers (e.g., Lil Miquela or Shudu) to ensure consistent interpretation. They were then asked to reflect on their experiences and attitudes using the survey questions.

Participation was voluntary and anonymous. All participants provided informed consent before attempting the questionnaire. The average completion time was approximately 15 minutes.

3.5 Instrumentation and Measures

The research began by presenting profiles of both a human influencer and an AI influencer, including a photo, a brief biography, and examples of their social media posts. These profiles served as a foundation for comparing and analyzing their influence. The questionnaire was then divided into 5 main sections:

1. Demographics
 - Age, gender, country of residence, education level, and daily time spent on social media.
2. Familiarity and engagement with influencers
 - Frequency of exposure to human vs. AI influencers.
 - Platforms used for influencer content.
3. Perceived Authenticity
 - Measured using a 10-item scale adapted from (Audrezet et al., 2020)
 - Items included: “This influencer feels genuine,” “This influencer shares real experiences,” etc.
 - Responses on a 7-point Likert scale (1 = Strongly disagree, 7 = Strongly agree).
 - Cronbach’s α = 0.897 (pilot tested).

4. Perceived Trustworthiness

- Measured using a 13-item scale adapted from (Ohanian, 1990) trustworthiness dimension.
- Items included: “I trust this influencer’s recommendations,” “This influencer is honest,” etc.
- Responses on a 7-point Likert scale (1 = Strongly disagree, 7 = Strongly agree).
- Cronbach’s α = 0.947 (pilot tested).

5. Parasocial Interaction

- Measured using a 10-item scale adapted from (Rubin et al., 1985) the Parasocial Interaction Scale.
- Items included: “I feel like I know this influencer,” “I look forward to their posts,” etc.
- Responses on a 7-point Likert scale (1 = Strongly disagree, 7 = Strongly agree).
- Cronbach’s α = 0.958 (pilot tested).

The questionnaire was designed to measure comparative perceptions between human influencers and AI influencers by asking participants to rate both types based on the same attributes. This allowed for within-subject analysis of differences in perception.

3.6 Data Analysis Techniques

The quantitative data was analyzed using SPSS. The following statistical techniques were applied:

- Descriptive Statistics: Frequencies, means, and standard deviations were calculated to describe the sample characteristics and general trends in perceptions.
- Paired Samples T-Tests: To compare participants’ ratings of human vs. AI influencers across the dimensions of authenticity, trustworthiness, and parasocial interaction. These tests assess whether the mean difference is statistically significant.

- Correlation Analysis: Pearson's correlation coefficients were used to examine relationships between authenticity, trustworthiness, and parasocial interaction in the context of AI influencers.
- Multiple Regression Analysis: Conducted to identify predictors of perceived trustworthiness toward AI influencers, using independent variables such as perceived authenticity and parasocial interaction with AI influencers
- ANCOVA Analysis: conducted to compare Gen Z attitudes toward human vs. AI influencers on authenticity, trustworthiness, and parasocial interaction while controlling for familiarity. This ensures that any significant differences are due to the influencer type rather than prior familiarity.

All results were tested at a 95% confidence level ($p < .05$).

3.7 Ethical Considerations

The study adhered to ethical standards and key ethical procedures:

- Informed Consent: Information about the study's purpose, the voluntary nature of participation, and data handling procedures were provided at the beginning of the Google Form. Participants indicated their consent before proceeding with the survey.
- Anonymity and Confidentiality: No personal identity information was collected. Data was stored in encrypted files and used solely for academic purposes.
- Data Security: All responses were securely stored on password-protected cloud storage, accessible only to the research team.
- Right to Withdraw: Participants could exit the survey at any time without penalty.

Given the novelty of AI influencers, the examples provided before the survey questions were explicit, ensuring that participants clearly understood they were evaluating non-human entities.

3.8 Limitations of Methodology

While the quantitative approach allows for objective measurement and broad generalization, several limitations must be acknowledged:

- Non-random Sampling: The use of purposive sampling limits the ability to generalize findings beyond digitally literate Gen Z populations.
- Cross-Sectional Design: The study captures perceptions at a single point in time. Longitudinal changes in attitudes toward AI influencers cannot be assessed.
- Self-Report Bias: Responses may be influenced by social desirability or lack of self-awareness, particularly regarding emotional engagement.

Despite these limitations, the methodology offers a robust foundation for understanding how Gen Z perceives AI influencers, enabling valid statistical comparison and hypotheses testing.

4. RESULTS

This section presents the results of the quantitative research designed to examine Generation Z's perceptions of AI influencers in comparison to human influencers across all research objectives. Data were gathered from a structured questionnaire distributed to 100 Gen Z participants. The data was analyzed using SPSS through descriptive and inferential statistical techniques including paired-sample t-tests, Pearson correlations, and multiple regression.

4.1 Descriptive Profile of Respondents

The sample consisted of 100 valid responses, drawn from a non-probability purposive sampling of Gen Z individuals aged between 18 and 27 years ($M = 23.75$, $SD = 1.956$). The gender breakdown included 54% male and 46% female.

The majority of participants reported residing in Thailand (42%), France (38%), Italy (9%), India (8%), and other countries, including China, Hong Kong, and the United Kingdom.

Among participants, 49% reported holding a master's degree or equivalent, 47% holding a bachelor's degree or equivalent, 3% holding a high school diploma or equivalent, and 1% holding a doctorate or higher-level qualification.

When asked about their daily social media usage:

- 58% reported spending 2-4 hours per day on social media.
- The most frequently used platforms were Tiktok (41%), Instagram (37%), YouTube (12%), and Facebook (10%)
- When asked about encounter frequency with human influencers (on a 5-point Likert scale), the mean was $M = 4.5$ ($SD = 0.732$), indicating relatively frequent exposure to their content
- However, when asked about encounter frequency with AI influencers (on a 5-point Likert scale), the mean was $M = 2.24$ ($SD = 1.055$), indicating a generally low-to-moderate frequency exposure to their content with considerable variation among respondents.

4.2 Perceived Authenticity

To evaluate RQ1, a paired-samples t-test was conducted comparing perceived authenticity scores between AI and human influencers. Authenticity was measured using a validated 10-item scale (Cronbach's $\alpha = 0.897$).

- Mean score for human influencers: $M = 4.841$, $SD = 0.084$
- Mean score for AI influencers: $M = 2.943$, $SD = 0.098$
- $t(99) = 17.006$, $p < .001$

The analysis revealed a highly significant difference, with human influencers perceived as markedly more authentic than AI influencers. This strongly supports Hypothesis 1 (H1) though interpretations should be qualified by the absence of measurement invariance testing (see Section 5.1).

Further examination of individual scale items showed that participants consistently rated AI influencers lower on statements such as “This influencer shares real-life experiences”. This outcome echoes findings by Audrezet et al. (2020), who emphasized the centrality of perceived authenticity in shaping consumer responses to influencers.

4.3 Trustworthiness

To evaluate RQ2, a paired-samples t-test was conducted comparing perceived trustworthiness scores between AI and human influencers. Trustworthiness was measured using a validated 13-item scale (Cronbach's $\alpha = 0.947$).

- Mean score for human influencers: $M = 4.717$, $SD = 0.097$
- Mean score for AI influencers: $M = 2.986$, $SD = 0.098$
- $t(99) = 16.777$, $p < .001$

The results revealed a statistically significant gap in trust levels, confirming Hypothesis 2 (H2). Trust in human influencers remains significantly higher than in AI influencers.

AI influencers, lacking human spontaneity, may inadvertently project an aura of strategic artificiality—heightening user suspicion, especially regarding promotional content.

Interestingly, the trust gap widened further when participants were asked to evaluate influencers' credibility in promoting products. AI influencers scored particularly low on items such as “I am likely to buy a product recommended by this influencer.” suggesting that even when AI/Virtual Influencers are visually appealing or trendy, they may lack persuasive power.

4.4 Parasocial Interaction (PSI)

To evaluate RQ3, a paired-samples t-test was conducted comparing parasocial interaction scores between AI and human influencers. Parasocial Interaction was measured using a validated 10-item scale (Cronbach's $\alpha = 0.958$).

- Mean score for human influencers: $M = 4.521$, $SD = 0.122$
- Mean score for AI influencers: $M = 2.674$, $SD = 0.110$
- $t(99) = 18.647$, $p < .001$

As hypothesized in H3, participants reported significantly lower levels of parasocial interaction with AI influencers.

Participants scored AI influencers particularly low on items like “I feel like I know this influencer”. This suggests that AI influencers have not yet achieved the level of emotional intimacy often observed in human-led parasocial relationships, despite some being designed with complex backstories and emotional expression algorithms.

4.5 Correlation Analysis

To examine the relationships between perceived authenticity, parasocial interaction, and trustworthiness toward AI influencers, a Pearson correlation analysis was conducted.

Variables	Mean Authenticity AI	Mean Trust AI	Mean PSI AI
Mean Authenticity AI	$r=1$	$r=0.741^{**}$ ($p < .001$)	$r=0.595^{**}$ ($p < .001$)
Mean Trust AI	$r=0.741^{**}$ ($p < .001$)	$r=1$	$r=0.669^{**}$ ($p < .001$)
Mean PSI AI	$r=0.595^{**}$ ($p < .001$)	$r=0.669^{**}$ ($p < .001$)	$r=1$

- There was a strong positive correlation between authenticity and trust in AI influencers ($r = 0.741$), supporting H4.
- A moderate-to-strong positive correlation was also found between parasocial interaction and trust ($r = 0.669$), supporting H5.
- Authenticity and parasocial interaction were also moderately positively correlated ($r = 0.595$), suggesting they may influence each other.

4.6 Multiple Regression Analysis: Predictors of Trust

A multiple linear regression was conducted to identify predictors of perceived trustworthiness toward AI influencers, using independent variables such as perceived authenticity and parasocial interaction with AI influencers

- Model was significant: $F(2, 97) = 82.711$, $p < .001$
- With $R^2 = 0.63$, meaning 63% of the variance in trust could be explained by the 2 predictors.

Predictor	β (Standardized)	p-value
Authenticity_AI	0.531	$p < .001$
Parasocial_AI	0.353	$p < .001$

Both predictors significantly contributed to the model, with authenticity being the stronger predictor of trust.

4.7 ANCOVA Analysis

An ANCOVA was conducted to examine the effect of influencer type (human vs. AI) on attitudes of Authenticity, Trustworthiness, and Parasocial Interaction, while controlling for participants' prior familiarity with the influencer type.

Authenticity	$(F(1,98) = 17.2, p < .001, \eta^2 = 0.15)$
Trustworthiness	$(F(1,98) = 15.8, p < .001, \eta^2 = 0.14)$
Parasocial Interaction	$(F(1,98) = 14.3, p < .001, \eta^2 = 0.13)$

Results indicated that influencer type had a statistically significant effect on all three outcomes.

After controlling for participants' prior familiarity, human influencers are still perceived as significantly more authentic, trustworthy, and capable of eliciting parasocial interaction than AI influencers. Therefore, the observed differences are primarily driven by the human factor, and not by familiarity.

5. DISCUSSION

In a within-subject survey of Gen Z ($N = 100$), participants rated human influencers higher than AI/virtual influencers on perceived authenticity, trustworthiness, and parasocial interaction (PSI). For AI influencers, both perceived authenticity and PSI each showed strong positive associations with trust and remained significant in a joint model, with authenticity exerting the larger standardized effect ($\beta_{\text{authenticity}} = 0.531$; $\beta_{\text{PSI}} = 0.353$; $R^2 = 0.63$). These results indicate lower perceived credibility and weaker parasocial bonding for AI agents relative to human creators, and align with classic accounts of source credibility and parasocial relationships (Ohanian, 1990; Rubin et al., 1985; Horton & Wohl, 1956).

5.1 Alternative Explanations and Design Considerations

Several design features temper strong causal claims.

First, familiarity/exposure asymmetry was pronounced: participants encountered human influencers far more frequently than AI influencers ($M = 4.5$ vs. 2.24 on exposure), which could have potentially inflated human ratings via mere-exposure effects or category knowledge advantages. To address this concern, we conducted ANCOVA analyses with prior familiarity as a covariate. Results confirmed that the human-AI differences on authenticity ($F(1,98) = 17.2$, $p < .001$, $\eta^2 = 0.15$), trustworthiness ($F(1,98) = 15.8$, $p < .001$, $\eta^2 = 0.14$), and PSI ($F(1,98) = 14.3$, $p < .001$, $\eta^2 = 0.13$) remained statistically significant after controlling for familiarity. Effect sizes were substantial ($\eta^2 = 0.13$ – 0.15), indicating that 13–15% of variance in perceptions is attributable to influencer type independent of exposure. While these findings suggest the observed gaps reflect genuine construct-level differences rather than mere familiarity artifacts, future studies should still consider experimental manipulation of exposure to establish causal directionality.

Second, the within-subject design did not report counterbalancing or order checks, so contrast or carryover effects cannot be ruled out.

Third, all measures came from the same source at one time point; despite high internal consistencies ($\alpha = 0.90\text{--}0.96$), common-method bias remains a possibility (no marker variable or procedural remedies were reported). To mitigate common-method variance in future work, we will separate measurement in time and/or method, include a theoretically unrelated marker, and model a latent methods factor as recommended by Podsakoff et al. (2012).

Fourth, construct validity was supported by reliability and face-valid item patterns, but no EFA/CFA or measurement-invariance tests were reported. This limitation is particularly consequential for our comparative findings (H1, H2, H3). Without establishing measurement invariance—specifically, configural (same factor structure), metric (equivalent loadings), and scalar (equivalent intercepts) invariance via multi-group CFA—we cannot definitively determine whether observed mean differences reflect genuine construct-level perceptual differences, differential item functioning across target types, or both. For instance, authenticity items referencing "real experiences" or PSI items involving "spontaneous interaction" may be interpreted differently when applied to AI versus human influencers, introducing construct-irrelevant variance. Consequently, our comparative results should be interpreted as robust observed-score differences that are theoretically meaningful and consistent with expectations, rather than as confirmed latent-construct differences. Although internal consistency was high, coefficient α alone does not confirm unidimensionality or factorial equivalence. Future research must prioritize multi-group CFA with formal invariance testing before making strong comparative claims about authenticity, trustworthiness, or PSI across human and AI influencers. Additionally, researchers should estimate model-based reliability (e.g., McDonald's ω) and test for differential item functioning.

5.2 Boundary Conditions and Heterogeneity

These findings should be interpreted within Gen Z audiences and platforms that foreground authenticity cues (e.g., TikTok, Instagram). Effects may vary with (a) disclosure frames and operator transparency, (b) degree of human-likeness and expressivity, (c) product

category risk (credence vs. experience goods), and (d) cultural norms. We did not manipulate these moderators; therefore, they delimit, rather than generalize, our claims.

5.3. Positioning in the Literature

Our results- human influencers outranking AI influencers on authenticity, trustworthiness, and PSI, with authenticity and PSI jointly explaining trust in AI agents-extends existing research on influencer marketing, parasocial theory, and trust-in-technology.

5.3.1 Authenticity as a Driver of Influence

Influencer authenticity is not a fixed trait (Audrezet et al., 2020), but a managed performance balancing passion/fit and transparency/disclosure. Over-standardized or opaque commercial content risks “fake authenticity,” providing a basis for why authenticity cues affect trust. Professionalization on Instagram standardizes “authentic” practices (e.g., direct address, backstage glimpses, selective brand fit), clarifying how creators manufacture closeness amid advertiser/platform constraints (van Driel & Dumitrica, 2020). Highly polished AI personas may therefore struggle to signal perceived realness. Qualitative evidence suggests Gen Z prioritizes transparency, real-life depictions, and value alignment over manufactured perfectionism, implying authenticity deficits will depress trust and engagement (Tirocchi, 2024).

5.3.2 Parasocial Bonds

PSI theory describes one-sided “intimacy at a distance” as a powerful audience–persona bond formed via perceived conversational give-and-take (Horton & Wohl, 1956). Originally operationalised with survey measures (Rubin et al., 1985), contemporary influencer studies link PSI to purchase intentions alongside credibility. In adolescent and young-adult samples, PSI often rivals or exceeds credibility as a driver of downstream behavior (Lou & Kim, 2019; Sokolova & Kefi, 2020). This research predicts that weaker PSI with AI agents will undercut trust and persuasion.

5.3.3 Trust/Credibility as Drivers of Persuasion

Ohanian (1990) formalized trustworthiness (distinct from expertise and attractiveness), as a primary dimension shaping endorsement effectiveness. This operationalization remains dominant in marketing contexts. In digital contexts, trust in technological agents depends not only on performance/ability but also on perceived

humanness and social presence (Lankton et al., 2015), suggesting structural headwinds for non-human sources such as AI influencers.

Glikson and Woolley's (2020) empirical review of human trust in AI documents how representation (robot/virtual/embedded), perceived capability, and context jointly shape trust formation and fragility-again implying that simply increasing human-likeness may not guarantee credibility.

5.3.4 AI/Virtual Influencers: Human-likeness, Disclosure, and Credibility

Emerging work on virtual influencers (VIs) shows that cues tied to human-likeness and operator type (brand- vs. non-brand-run) shape authenticity signals (e.g., emotional expression, pronoun/punctuation use) and engagement (Ju et al., 2024). Yet disclosure that an influencer is virtual can depress anthropomorphism and credibility, sometimes lowering brand trust depending on culture (Muniz et al., 2023). Platform norms and product-influencer fit further condition credibility (De Veirman et al., 2017). These mixed patterns mirror the practical tension observed: designable cues can help, but transparency about non-humanness often re-activates skepticism.

5.3.5 Result Contribution, Alignment and Divergence

This study offers a within-subject comparison of AI versus human influencers on three validated constructs (authenticity, trustworthiness, PSI) and show-within the AI subset-that authenticity and PSI jointly explain substantial variance in trust. The design strengthens comparability across constructs and helps isolate the credibility/relationality deficit attached to AI/Virtual Influencers. Measures follow established foundations: trustworthiness (Ohanian, 1990); PSI (Rubin et al., 1985); authenticity conceptualized per Audrezet et al. (2020).

The observed pattern (human > AI on authenticity/trust/PSI) coheres with authenticity-as-performance accounts and Gen Z's authenticity expectations. It also matches trust-in-AI reviews predicting fragile, context-dependent credibility for non-human agents (Audrezet et al., 2020; van Driel & Dumitrica, 2020; Tirocchi, 2024; Glikson & Woolley, 2020).

Content-analytic evidence suggests that specific textual cues (emotions, pronouns, punctuation) and non-brand operation can enhance VI engagement (Ju et al., 2024).

However, disclosure research shows that making non-humanness salient reduces anthropomorphism and brand trust (Muniz et al., 2023)—boundary conditions that likely limit how far cues can close the gap. Our cross-country Gen Z data add to this mixed picture by showing that, even with awareness of AI status, authenticity and relational cues still matter but do not erase the human–AI gaps.

5.3.6 Boundary Conditions from Existing Literature

The literature points to moderators that can attenuate or amplify AI trust deficits: explicit disclosure/transparency (often negative for trust), operator type and expressive cues (sometimes positive for engagement), platform norms and product–influencer fit, and cultural context (evidence of cross-national differences in how disclosure and anthropomorphism translate to brand trust). Our design covered human- vs. AI-status and a cross-country Gen Z sample but did not manipulate disclosure style, operator type, product category, or platform. Future research can test these levers directly.

6. CONCLUSION

In sum, the results demonstrate that human influencers receive significantly higher ratings than AI influencers on authenticity, trust, and PSI. ANCOVA analyses confirmed these differences persist after controlling for prior familiarity, indicating genuine perceptual gaps rather than mere exposure effects. The findings also clarify how AI agents can earn trust: chiefly through perceived authenticity, with parasocial bonding as a secondary pathway. Given cross-sectional, self-report, and design constraints, these interpretations should be viewed as strong associations consistent with theorized mechanisms, not definitive evidence of causality. Subsequent sections explore implications and recommendations for future practice and research.

6.1 Theoretical Implications

Confirming core theories with a non-human source

The large human > AI gaps on authenticity, trustworthiness, and parasocial interaction (PSI) are consistent with authenticity-as-performance accounts to synthetic agents: absent cues of passion/fit and transparent self-presentation, audiences infer “performed” authenticity and discount credibility (Audrezet et al., 2020; van Driel & Dumitrica, 2020).

A dual-path account of trust in AI influencers

The results provide strong empirical support for the dual-path model proposed in Section 2.7. Within the AI subset, authenticity ($\beta = 0.531$) and PSI ($\beta = 0.353$) jointly explain trust ($R^2 = 0.63$), confirming two complementary routes—a credibility path (authenticity cues) and a relational path (PSI). This pattern validates the theoretical prediction that both cognitive (authenticity-based) and affective (PSI-based) mechanisms independently contribute to trust formation in AI influencers.

Boundary conditions for PSI with non-human agents.

Average PSI was markedly lower for AI than for humans, consistent with limits of “intimacy at a distance” when spontaneity, vulnerability, and small imperfections are hard to convey (Horton & Wohl, 1956). At the same time, PSI retained unique explanatory power for trust—suggesting it is viable but rarer for AI/Virtual Influencers. This pattern aligns with influencer studies showing PSI and credibility both drive downstream outcomes in youth cohorts (Lou & Kim, 2019; Sokolova & Kefi, 2020), however evidence can vary by culture (e.g., Omeish et al., 2025), underscoring context-dependence.

Humanness, skepticism, and the Uncanny Valley

Two plausible mechanisms can account for the AI trust deficit: (i) anthropomorphism/humanness—trust rises with social presence until near-human cues trigger uncanny responses (Mori, 1970); and (ii) persuasion-knowledge/algorithmic skepticism—salient artificiality activates inferences of strategic intent, dampening credibility (Lankton et al., 2015; Glikson & Woolley, 2020). While the data is consistent, it does not identify which mechanism is dominant. Future experiments should manipulate graded human-likeness (stylized vs. photorealistic avatars) and disclosure salience to adjudicate between uncanny-valley and persuasion-knowledge accounts.

Critically, our cross-sectional, observational design precludes causal inference regarding which mechanism drives the observed trust deficit. The correlational nature of our data means we can identify that authenticity and PSI are associated with trust in AI influencers, but cannot determine whether manipulating these factors would causally increase trust, nor can we isolate whether the human-AI gap stems primarily from uncanny valley effects,

persuasion knowledge activation, or their interaction. Experimental manipulation is essential to establish causal pathways and identify the relative contribution of competing mechanisms (see Section 6.3 for more specific experimental recommendations).

Scope Conditions

Claims apply to Gen Z across several countries, with AI identity made salient and no sponsorship context, using within-subject ratings and validated multi-item scales. Reliability was high, but we did not counterbalance order, implement common-method remedies, or test factor structure/invariance. While participants reported higher prior exposure to human influencers, ANCOVA analyses controlling for familiarity confirmed that comparative findings remained robust, suggesting the human-AI gaps reflect genuine perceptual differences rather than exposure artifacts.

Concrete propositions

P1 (Dual-path): Among Gen Z, perceived authenticity and PSI will additively predict trust in AI influencers in non-sponsored contexts.

P2 (Deficit): Controlling for exposure, AI influencers will score lower than human influencers on authenticity, PSI, and trust.

P3 (Moderators): The AI trust deficit will shrink under designs that increase perceived humanness/reciprocity (e.g., co-appearance with humans, responsive interactions) and expand when AI identity is made salient in ways that trigger persuasion knowledge (e.g., certain disclosure framings). Evidence on these moderators is mixed, and the effects are likely culture- and platform-dependent (Ju et al., 2024; Glikson & Woolley, 2020).

P4 A direct test of the uncanny-valley account could experimentally manipulate degree of human-likeness (e.g., stylized vs. photorealistic avatars) and examine curvilinear effects on trust/PSI. A complementary test of persuasion-knowledge activation could vary disclosure frames and operator transparency to observe whether heightened salience of artificiality depresses anthropomorphism and trust, as suggested by trust-in-AI and disclosure guidance.

6.2 Managerial Implications

When trust matters, position AI as a complement, not a substitute.

Given the large human > AI gaps in authenticity, PSI, and trust, use AI/Virtual Influencers to augment reach and consistency, while relying on human creators for trust-critical persuasion and conversion. This aligns with evidence that trustworthiness is central to endorsement effectiveness and that PSI strongly drives youth outcomes (Ohanian, 1990; Lou & Kim, 2019; Sokolova & Kefi, 2020).

Authenticity as the first design lever; PSI the second

Given authenticity's larger standardized effect ($\beta = 0.531$ vs 0.353), prioritize value/fit consistency, backstory stability, and transparent motives; layer relational tactics (Q&As, reply cadence) to lift PSI where feasible (direct address, Q&A formats, recurring interactions). Caption-level choices (warmer pronouns, judicious punctuation, emotional expression) and operator strategies can move engagement for virtual influencers, but effects are context-bound (Ju et al., 2024).

Disclosure and identity transparency

We recommend compliance with the FTC's Endorsement Guides (Federal Trade Commission, 2023) and comparable UK/EU guidance for clear, conspicuous disclosure of material connections in influencer content. For AI identity, we advise plain-language transparency (e.g., "This influencer is AI-generated") and monitoring of sentiment/trust trade-offs over time, recognizing that salience of non-humanness can reduce anthropomorphism and short-run trust in some contexts. Cross-market activations should follow local rules e.g., ASA/CAP (Committee of Advertising Practice & Advertising Standards Authority, 2023) in the UK; EU unfair-commercial-practices enforcement (European Commission, 2023). Where policy requires conspicuous disclosure, short-term trust or engagement may dip when non-humanness is salient; we therefore recommend markets-by-platform pilots with preregistered outcomes before wide deployment.

Role-fit across the funnel

For scalable, low-stakes information delivery (FAQs/explainers), AI/VI Influencers may be efficient complements. For trust-critical persuasion in credence/high-risk

categories, human creators remain preferable given higher perceived accountability and established PSI effects among youth cohorts. We encourage pre-registered A/B tests by platform/market to validate role-fit before scale-up.

Human-AI co-creation

Pairing AI agents with trusted human creators in recurring series may blend the scale advantages of AI with human warmth/credibility. Teams should track validated trustworthiness and PSI items alongside behavioral metrics to detect lift attributable to the pairing.

Localization and testing

Recent evidence suggests that culture and platform norms shape responses to anthropomorphism and disclosure. A/B testing pilots by market and platform (e.g., Instagram vs. TikTok) are prudent. Use post-level diagnostics inspired by the content-analytic cues that predicted engagement for virtual influencers (Ju et al., 2024).

Policy and ethics

Because AI/VI Influencer personas blur lines between automation and endorsement, marketers should articulate internal policies for AI identity transparency, content moderation, and accountability for errors or harms. These policies should align with evolving consumer-protection guidance (e.g., FTC Endorsement Guides; ASA/CAP) and be disclosed to audiences in accessible language. Researchers should study how different transparency framings (e.g., badges vs. captions) affect long-term trust.

6.3 Limitations and Future Direction

Despite steps to enhance reliability, several limitations merit note. As discussed in Section 5.1, due to methodological design features, we emphasize broader constraints.

First, the study focuses on Gen Z and an uneven, cross-country sample was obtained. This limits generalizability to other cohorts and markets. Future work should replicate with balanced samples and different age groups.

Second, evaluations were collected in a non-sponsored frame without manipulating disclosure styles, operator type, product category, or platform norms; subsequent experiments should orthogonally vary these cues to identify when AI trust deficits shrink or widen.

Third, while multi-item measures showed high internal consistency, we did not establish cross-target measurement equivalence (human vs. AI); future research should confirm factor structure and invariance before making fine-grained comparisons.

Fourth, mechanisms were scoped to authenticity and parasocial interaction; alternative pathways (e.g., perceived risk, privacy concern, persuasion knowledge) and moderated mediation remain to be tested.

Fifth, the cross-sectional design prevents causal inference and mechanism identification. We cannot determine whether authenticity or PSI-enhancing interventions would causally increase AI influencer trust, nor which mechanism-uncanny valley (Mori, 1970) or persuasion knowledge (Glikson & Woolley, 2020)-primarily drives the human-AI gap.

Future experimental research should manipulate: (1) AI human-likeness on a gradient (stylized to photorealistic) to test for curvilinear uncanny valley effects versus linear anthropomorphism effects, and (2) disclosure salience (absent vs. prominent AI identity disclosure) to assess whether making artificiality salient activates persuasion knowledge and decreases trust. A 3 (Human-likeness) × 2 (Disclosure) factorial design would identify their relative contributions and potential interactions. These experiments should employ random assignment, behavioral dependent variables, manipulation checks, and pre-registration to establish causal pathways and mechanism dominance.

Finally, the study was cross-sectional and unregistered, and behavioral outcomes were not assessed. Pre-registered field or platform-level tests using behavioral metrics (e.g., reveal, click-through, or opt-in) would strengthen inference. Taken together, these limitations qualify, but do not overturn, the central implication: AI/Virtual personas face credibility and relationality headwinds that can be reduced under specific cue configurations.

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