

From Observation to Co-Creation: A Netnographic Review of AI-Driven Consumer Behavior

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ABSTRACT

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As artificial intelligence (AI) continues to transform the landscape of digital consumer experiences, traditional netnographic methods face significant disruption—both in terms of methodological execution and theoretical framing. This systematic review explores how the growing presence of AI, functioning not only as a technological tool but also as an agentic participant, reshapes the way netnography is practiced in marketing and consumer behavior research. Recognizing a widening gap in the literature, the study aims to synthesize current conceptual and methodological advancements at the intersection of ethnographic inquiry and intelligent systems. Employing the PRISMA 2020 protocol for systematic reviews, 43 peer-reviewed journal articles published between 2013 and 2024 were retrieved from Scopus and Web of Science databases. A thematic synthesis of these articles reveals five dominant themes: the methodological evolution of netnography within online consumer communities; the role of AI in predictive personalization; emerging patterns of consumer–AI value co-creation; new relational models of human–AI interaction; and ethical and epistemological challenges posed by AI-augmented ethnography. These themes collectively inform the development of a novel conceptual framework, AI-Netnography which positions both human and algorithmic agents as co-constructors of meaning, identity, and experience. By reimagining netnographic inquiry for AI-mediated environments, this review not only advances the field of qualitative marketing research but also proposes new pathways for ethically responsible and epistemologically inclusive digital consumer studies.

INTRODUCTION

The proliferation of artificial intelligence (AI) in digital marketing has fundamentally transformed how consumers interact with brands. No longer confined to traditional advertising, marketing practices now leverage AI to personalize experiences, predict preferences, and automate communication. This rapid technological shift demands not only strategic adaptation but also methodological innovation to understand the complexity of consumer behavior in AI-mediated environments (Hermann & Puntoni, 2024; Vlačić et al., 2021).

Netnography, a digital adaptation of ethnography, has emerged as a powerful method for exploring consumer behavior in online communities. Traditionally centered on observation, netnographic approaches have evolved in tandem with technological advances, moving toward participatory and computational forms. This evolution is particularly salient as Web 2.0 transitions into the data-driven logic of Web 3.0, where artificial intelligence augments both consumer experiences and research practices (Teepapal, 2025; Zulaikha et al., 2020). Increasingly, AI tools are embedded within digital ecosystems—automating responses, facilitating recommendations, and co-producing meaning in real-time interactions.

Despite the growing use of netnography and the widespread adoption of AI in marketing, these two domains have largely evolved in parallel rather than in tandem. Existing literature tends to examine either AI-driven marketing or netnographic methods in isolation. Few studies explicitly address how netnography must adapt to account for the presence of intelligent, agentic technologies that shape, not merely mediate consumer experiences. Moreover, the intersection of AI and consumer co-creation remains under-theorized, especially in contexts involving digital natives such as Generation Z. This gap underscores the need for a comprehensive review that bridges methodological transformation with conceptual advancements in AI-informed consumer research.

This review seeks to answer the question: How has netnographic methodology evolved to address the rise of AI-mediated consumer co-creation, and what future directions emerge at this intersection? By systematically synthesizing relevant literature from 2013 to 2024, this study maps out the trajectory of netnography in the AI era, identifies key themes and research gaps, and proposes a conceptual framework for studying consumer–AI interactions.

Unlike previous reviews that focus either on AI applications or on netnographic traditions, this study offers an



integrated perspective that conceptualizes AI not just as a tool, but as a co-creative actor in digital consumption. This novel lens enables a more holistic understanding of value co-creation, algorithmic agency, and ethical complexity in modern marketing environments. The findings contribute to marketing scholarship by offering both theoretical refinement and practical implications for future netnographic research in AI-mediated contexts.

LITERATURE REVIEW

The literature underpinning this review is structured around four interconnected conceptual pillars that illuminate the transformation of netnographic inquiry within AI-influenced consumer environments. These pillars—namely (1) the evolution of netnographic methods, (2) AI's role in shaping consumer behavior, (3) consumer participation in value co-creation, and (4) models of human–AI interaction—jointly provide a comprehensive lens through which to examine the convergence of behavioral dynamics, technological agency, and qualitative research approaches in digitally mediated ecosystems.

Evolution of Netnography

Netnography has undergone significant methodological transformation since its origins as a passive observational tool for online communities. Initially focused on researcher immersion and textual discourse, the method has expanded into participatory netnography—where the researcher actively engages with online participants—and computational netnography, which incorporates machine learning and natural language processing (NLP) to extract patterns from large-scale social data (Tang et al., 2022). More recently, scholars have introduced the concept of agentic netnography, where AI systems themselves become meaningful entities within ethnographic inquiry, not only mediating but actively shaping digital interactions. This evolution challenges traditional boundaries of researcher–participant dynamics and demands a new understanding of data, agency, and meaning.

AI-Driven Consumer Behavior

Artificial intelligence has transformed consumer behavior by enabling personalized, predictive, and real-time engagement. Algorithms now collect and analyze behavioral and contextual data to shape user experiences, suggest products, and automate interactions across platforms (Puntoni et al., 2021). Key constructs such as algorithmic trust, transparency, and perceived intelligence play crucial roles in shaping consumer responses (Chandrakumar, 2024). Especially among digitally native generations like Gen Z, AI is not viewed merely as a tool but as a conversational partner, recommendation engine, and even a symbolic brand actor. This shift reflects the deep embedding of AI within daily consumer journeys.

Consumer Agency and Value Co-Creation

Drawing from the service-dominant logic of marketing, value is increasingly seen as co-created rather than delivered. Consumers actively engage with both human and algorithmic actors in shaping their experiences, content, and brand relationships. Digital platforms such as social media, community forums, and e-commerce ecosystems empower consumers to act as co-producers of value. AI systems contribute to this co-creation process by customizing offerings and adapting in response to user input. The boundaries between producer and consumer are blurred, forming what can be described as algorithmically-assisted co-creation (Guerra-Tamez et al., 2024). In this context, consumers are not only targets of marketing strategies but partners in experience formation.

Human–AI Interaction Models

As AI becomes increasingly embedded in everyday life, researchers have begun to explore models of interaction that reflect emotional, ethical, and relational dimensions. Human–AI interaction involves more than mere functionality—it includes perceived empathy, social presence, anthropomorphism, and trust (AbouElgheit, 2024). These dynamics are critical in contexts where AI acts as a service agent, recommender, or influencer. Understanding how consumers relate to artificial intelligence (AI) actors necessitates a theoretical shift—from perceiving AI as a passive intermediary to acknowledging its semi-autonomous role in meaning-making and behavioral influence. This reconceptualization carries significant implications for the methodological and ethical dimensions of netnographic inquiry (Kozinets & Gambetti (2021)).

Taken together, these four conceptual domains form a holistic foundation for studying the evolving relationship between consumers, AI technologies, and digital ethnographic practices. They enable the development of an updated netnographic approach, AI-NETNOGRAPHY that accounts for the agency of both human and machine participants in the co-construction of consumer culture. The following figure presents the conceptual framework underpinning this review, capturing four foundational constructs that explain the evolving nature of netnography in AI-mediated consumer contexts. Each construct reflects a distinct theoretical contribution, illustrating the shift of netnography from passive observation toward an agentic methodology that actively involves both human and artificial actors. Figure 2 visualizes this conceptual synthesis, positioning "Evolving Netnography" at the center, supported by four interrelated domains: (1) Netnographic Methods, (2) AI in Consumer Behavior, (3) Consumer Co-Creation, and (4) Human–AI Interaction. These

domains operate in conjunction, providing the methodological and theoretical basis for this review.

AI-Netnography Convergence Map

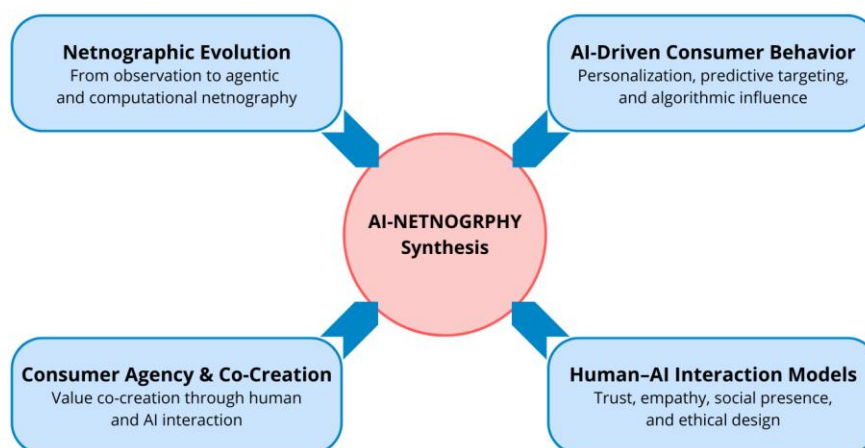


Figure 1. Theoretical Model of AI-Netnographic Convergence

Source: Author's elaboration based on Kozinets & Gambetti (2021), Puntoni et al. (2021), and Chandrakumar (2024).

A visual summary of four conceptual pillars shaping the evolution of netnography in AI-mediated consumer environments. This Figure 2 clarifies the conceptual reasoning that guides the analysis. The top-left quadrant depicts the methodological trajectory of netnography, from observational to participatory, computational, and agentic approaches, signaling the broadening scope of digital ethnography. The top-right quadrant illustrates how AI transforms consumer behavior through real-time personalization, predictive analytics, and algorithmic engagement. The bottom-left quadrant emphasizes consumer agency in the co-creation of meaning, where users collaborate with both brands and algorithmic systems in shaping digital experiences. The bottom-right quadrant presents models of human–AI interaction, addressing trust, emotional engagement, social presence, and ethical alignment in collaborative environments. Together, these components converge into the concept of AI-NETNOGRAPHY, a theoretical and methodological synthesis that recognizes both human and AI actors as co-constructors of value, meaning, and experience within intelligent marketing ecosystems.

METHODS

This systematic literature review employed a rigorous and transparent approach based on the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol (Page et al., 2021). The primary objective was to critically examine how netnographic research methods have evolved in response to the increasing prevalence of AI in digital marketing, with particular attention to the transformation from passive observation to participatory co-creation. The review aimed to synthesize scholarly insights, map current research trajectories, and explore implications for consumer behavior research in intelligent digital environments.

The data collection process involved a comprehensive search of two major academic databases: Scopus and Web of Science, both known for their extensive indexing of high-quality, peer-reviewed journals in marketing, consumer behavior, communication, and information systems. These databases were selected to ensure that the review covered a wide range of multidisciplinary contributions relevant to AI-driven consumer engagement. The search terms were carefully selected to capture key concepts such as “netnography”, “digital ethnography”, “online ethnography”, “AI-driven marketing”, “consumer behavior”, “co-creation”, “value co-creation”, and “human–AI interaction”. These keywords were combined using Boolean operators to form the following query:

("netnography" OR "digital ethnography" OR "online ethnography") AND ("AI" OR "artificial intelligence" OR "machine learning") AND ("consumer behavior" OR "customer engagement" OR "value co-creation" OR "human-AI interaction")

This query was intended to ensure a focused yet inclusive retrieval of literature situated at the intersection of qualitative digital methods and AI-mediated consumer interaction. To maintain relevance and timeliness, the search was limited to peer-reviewed journal articles published in English between 2013 and 2024, a period during which interest in AI applications in marketing and digital ethnographic methodologies has intensified (Vlačić et al., 2021).

The inclusion criteria were: (1) peer-reviewed journal publications, (2) written in English, and (3) explicitly focused on the convergence of netnographic inquiry, artificial intelligence, and consumer behavior. The review included empirical and conceptual research papers, case studies, and relevant conference proceedings. Exclusion criteria eliminated studies that (a) focused solely on technical aspects of AI without linking to consumer perspectives, (b) lacked methodological clarity or thematic alignment, or (c) appeared as editorials, theses, or book chapters. Some

studies were also excluded if they addressed AI use in entrepreneurship or robotic applications without engaging with consumer insight formation (Alhitmi et al., 2024; Giuggioli & Pellegrini, 2023).

The article selection process followed the PRISMA 2020 guidelines. The search initially identified 237 records. After removing 39 duplicates, a total of 198 articles underwent title and abstract screening. This stage eliminated publications not aligning with the thematic scope. Eighty-four articles were then assessed in full-text form for eligibility. Ultimately, 43 studies were included in the final synthesis. This multi-step selection process is visually represented in the PRISMA 2020 flow diagram (see Figure 1), ensuring transparency and replicability.

A structured data extraction form was developed to systematically collect key information from each article. The form included fields such as author(s), year of publication, journal, research question(s), methodology, data sources, theoretical framework, key findings, and implications. Following data extraction, a thematic synthesis was conducted. Studies were reviewed to identify patterns, concepts, and contributions across diverse consumer-AI contexts. Themes were clustered into five categories: (1) netnography in online consumer communities, (2) AI as an interactive agent in digital ecosystems, (3) consumer agency and value co-creation, (4) methodological innovations in netnography, and (5) ethical and epistemological challenges of AI-mediated research.

The analytical process emphasized reliability and academic rigor. Two independent reviewers participated in screening, full-text review, and thematic coding. Discrepancies were resolved through discussion and consensus. A pilot coding phase involving five randomly selected articles was conducted to validate the thematic framework before full-scale application. Although software such as NVivo or ATLAS.ti was not employed, coding and clustering were manually performed using Microsoft Excel to allow iterative comparison and pattern recognition (Chintalapati & Pandey, 2022).

To ensure ethical compliance and objectivity, only publicly accessible peer-reviewed articles were used, and no personal or sensitive data were involved. The review's integration of a transparent protocol, validated thematic analysis, and multidisciplinary source base provides a robust foundation for understanding the evolution of netnography in the era of AI and offers strategic insights for future consumer behavior research.

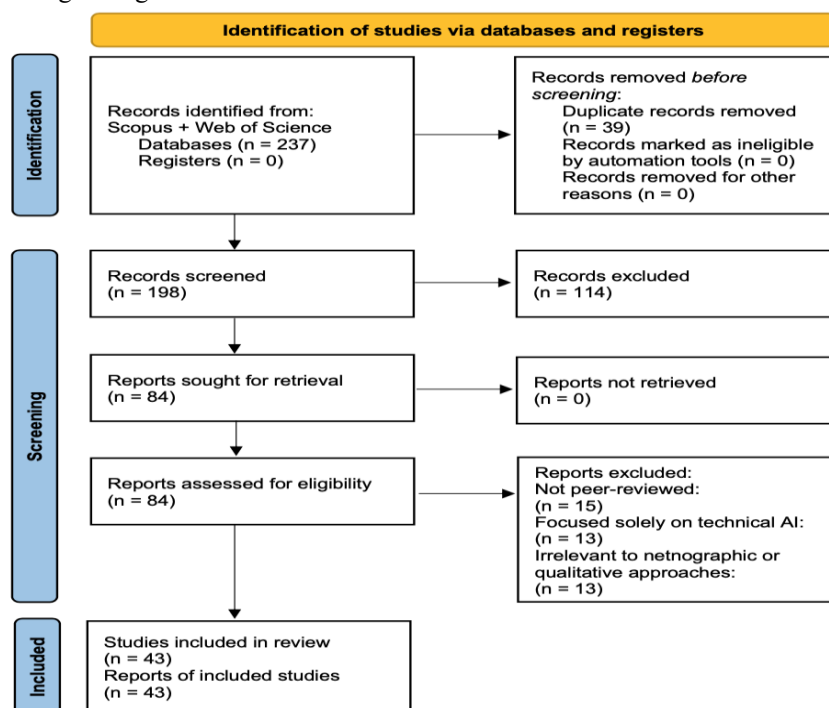


Figure 2. PRISMA 2020 Flow Diagram of Study Selection Process

Source: Adapted from Page MJ et al. *BMJ* 2021;372:n71. doi:10.1136/bmj.n71. Licensed under CC BY 4.0. (Page et al., 2021).

RESULT

Thematic synthesis of the 43 selected articles revealed five interrelated themes that reflect the evolving role of netnography in AI-mediated consumer environments. These themes emerged through iterative coding and cross-analysis of methodological focus, theoretical insights, and empirical contributions. Each theme represents a distinct but interconnected dimension of how netnography adapts to the rise of algorithmic personalization, digital co-creation, and human-AI interaction. The discussion below elaborates these themes in detail, supported by illustrative examples and analytical commentary.

Netnography in Online Consumer Communities

Netnographic research has been instrumental in uncovering the sociocultural dimensions of online consumer communities. These digital ecosystems enable consumers to connect, express brand-related experiences, and influence one another. For instance, Zaglia (2013) and Dessart et al. (2015) highlight how consumers actively engage in co-creating meaning and brand narratives within social media and brand-affiliated platforms.

Netnography has evolved significantly since its inception as an observational method for studying online communities. In response to digital transformation, particularly the rise of AI, researchers have developed multiple modes of netnographic engagement. Table 1 outlines this evolution, ranging from passive observation to participatory immersion, computational analysis, and agentic interaction.

Table 1. Synthesis – Netnography in Online Communities

Authors	Focus of Study	Key Findings	Relevance to Review
Zaglia (2013)	Brand communities embedded in social networks	Community members reinforce loyalty and identity through interaction	Shows cultural depth of digital brand engagement
Dessart et al. (2015)	Consumer engagement in online brand communities	Emotional and cognitive engagement drives co-creation and advocacy	Supports role of netnography in capturing behaviors
Hsieh & Wei (2017)	Real–virtual bridge in brand community	Online interaction enhances offline commitment to brands	Validates netnography’s insight into loyalty

Source: Author’s synthesis from selected academic articles

Table 1 demonstrates a methodological continuum, where netnography shifts from researcher-centric inquiry to co-constructed digital ethnographies involving non-human actors. Each mode reflects different epistemological positions and levels of interaction between researchers, communities, and algorithms. This evolution underscores the increasing complexity of conducting ethnographic research in AI-enhanced environments.

These studies demonstrate that netnography offers not only descriptive insights, but also interpretive depth regarding how identity, loyalty, and trust are formed through digital interactions.

AI as an Interactive Agent in Digital Experiences

The integration of AI tools—such as chatbots, recommendation engines, and virtual agents, has shifted the focus of netnographic research from observing human–human interactions to human–AI dialogues. Recent studies like Brüns & Meißner (2024) and Kumar et al. (2024) show that AI not only mediates interaction but also co-produces meaning within the digital customer experience. Artificial intelligence has been deployed across various stages of the consumer journey, reshaping how brands understand, target, and interact with consumers. Table 2 summarizes key applications of AI in consumer behavior research, highlighting functional areas such as personalization, prediction, and behavioral nudging.

Table 2. Synthesis – AI as an Interactive Agent

Authors	AI Context Studied	Key Findings	Relevance
Brüns & Meißner (2024)	Generative AI in social media	Overuse of AI reduces perceived brand authenticity	Suggests AI must be balanced in consumer dialogue
Kumar et al. (2024)	AI tools in customer engagement	AI enhances engagement and brand building through NLP-driven interaction	Reinforces AI as co-creator of experience
Teepapal (2025)	AI personalization on social media	Personalized experiences via AI boost consumer trust and interaction	Ties AI design to consumer perception

Source: Author’s synthesis from selected academic articles

As reflected in Table 2, AI technologies contribute not only to operational efficiency but also to strategic consumer engagement. These applications support firms in crafting adaptive, data-driven marketing practices, while also raising questions about privacy, autonomy, and the boundaries of persuasive design.

This theme illustrates a critical epistemological shift where AI is no longer a tool but an active actor—thus necessitating an update in netnographic approaches to include agentic AI.

Consumer Agency and Value Co-Creation

The movement from consumer-as-recipient to consumer-as-participant is strongly tied to the rise of co-creation, a theme central to both AI and netnography. Studies such as Pongsakornrungrasit et al. (2008) and Guerra-Tamez et al. (2024) show that consumers collaborate with brands—often aided by AI—to develop personalized value propositions.

The emergence of digital platforms and intelligent systems has redefined the concept of consumer agency. Instead of acting as passive recipients, consumers now co-create meaning, value, and experiences alongside brands and AI tools. Table 3 identifies core themes related to consumer agency and the logic of value co-creation in AI-mediated contexts.

Table 3. Synthesis – Consumer Co-Creation and Agency

Authors	Focus Area	Key Findings	Relevance
Pongsakornrungrasit et al. (2008)	Brand communities as value co-creation spaces	Brand meaning co-created through dialogue between firms and consumers	Foundational to service-dominant logic
Guerra-Tamez et al. (2024)	Gen Z AI-influenced trust and purchasing	AI increases brand trust and co-decision-making in digital natives	Highlights generational agency in AI context
Chandrakumar (2024)	AI personalization for Gen-Z	Gen-Z adapts quickly to AI-assisted decision tools	Supports demographic shift in co-creation agency

Source: Author's synthesis from selected academic articles

Table 3 reveals that consumers assert agency through content creation, customization, and dialogical interactions with both human and non-human entities. These activities illustrate the participatory nature of digital consumption and reinforce the view that value is a negotiated and collaborative process shaped by hybrid actors.

These studies collectively argue for the empowerment of consumers via both social community and AI personalization, reinforcing their roles as co-producers of experience.

Methodological Shifts in Netnography

AI also transforms the way netnography is conducted. From human immersion in forums to automated analysis of sentiment across thousands of posts, the computational turn is evident. Works such as Bartl et al. (2016) and Tang et al. (2022) discuss the growing adoption of NLP and machine learning in netnographic workflows.

The integration of artificial intelligence has led to notable methodological transformations within the practice of netnography. Rather than relying solely on immersive observation and community participation, researchers are now engaging with algorithmic tools, automated content generation, and data-driven insight extraction. Table 4 summarizes these methodological shifts, comparing conventional ethnographic roles with emerging AI-mediated approaches.

Table 4. Summary of Key Literature on Netnography and AI-Driven Consumer Research

Authors	Methodological Focus	Key Findings	Relevance
Bartl et al. (2016)	Review of netnography literature	Netnography evolving with digital tools; calls for methodological clarity	Benchmarks shifts over time
Tang et al. (2022)	AI in data-driven industries	Advocates hybrid methods combining ethnography with automation	Opens space for AI-human mixed method
Chintalapati & Pandey (2022)	Literature review on AI in marketing	Highlights the gap in AI-informed qualitative analysis	Supports need for new protocols in netnography

Source: Author's synthesis from selected academic articles

As shown in Table 4, the role of the researcher has expanded from narrative observer to algorithmic collaborator, necessitating new competencies in data literacy and interpretive flexibility. The locus of meaning has likewise shifted, with AI co-constructing insights alongside researchers and participants. These developments call for a recalibration of netnographic reflexivity and raise critical questions about representation, authenticity, and the evolving role of the ethnographer in hybrid digital environments.

Thus, the epistemology of netnography must evolve, recognizing that digital “immersion” may now include AI-assisted analytical immersion.

Ethical and Epistemological Tensions

Finally, scholars warn of the ethical risks in AI-mediated marketing, algorithmic bias, manipulation, and loss of consumer autonomy. Studies such as Raji et al. (2024) and Hermann (2022)) stress the necessity of embedding ethics into AI co-creation processes.

Beyond methodological change, the convergence of netnography and AI research requires an examination of how consumers perceive, relate to, and co-exist with AI agents. Human–AI interaction studies offer insights into the cognitive, emotional, and social dimensions of this relationship. Table 5 outlines major themes that recur across the literature, reflecting the complex interplay between technological affordances and human expectations.

Table 5. Synthesis – Ethical & Epistemological Concerns

Authors	Ethical Focus	Key Findings	Relevance
Raji et al. (2024)	Algorithmic bias in e-commerce AI	AI personalization can reinforce bias and exclusion	Calls for ethical safeguards in AI-driven marketing
Hermann (2022)	Ethics of AI in marketing for social good	Proposes ethical frameworks to guide AI development in marketing	Supports normative foundations for AI–netnography link
Lagadec et al. (2024)	AI in education and decision tools	Unchecked AI may compromise agency and informed consent	Highlights risk to consumer freedom

Source: Author's synthesis from selected academic articles

Table 5 highlights how trust, empathy, social presence, and ethical considerations are no longer peripheral concerns but central components of AI-mediated experiences. These themes suggest that AI agents are increasingly embedded in affective and symbolic aspects of consumer life, functioning as semi-autonomous actors rather than passive tools. Understanding these dynamics is crucial for advancing both theoretical and applied research in AI-driven marketing and digital ethnography.

DISCUSSION

Having outlined the major themes derived from the literature, this section now turns to a deeper interpretation of their significance. The discussion critically reflects on how these findings reshape conventional netnographic assumptions, particularly in light of AI's increasing agency in digital environments. It also integrates theoretical perspectives to contextualize the evolving dynamics of human–AI interaction, consumer co-creation, and methodological transformation in marketing research.

The findings underscore a paradigm shift in netnography, driven by the convergence of human and algorithmic participation in consumer culture. Traditionally rooted in human-centered ethnographic observation, netnography must now evolve to accommodate AI as an epistemological actor. The emergence of agentic netnography—where non-human systems participate in meaning-making—redefines the boundaries of observation, interpretation, and immersion in digital contexts.

AI's transformation from a technical tool to an interactive agent demands theoretical reconsideration. As chatbots, recommendation engines, and virtual influencers become embedded in consumer journeys, their influence extends beyond automation to active involvement in shaping perceptions and behaviors. Studies emphasizing perceived empathy, anthropomorphism, and social presence of AI highlight that consumers increasingly relate to these systems as social actors rather than neutral intermediaries. This reconceptualization challenges marketers and researchers to move beyond functional analysis and consider AI's symbolic, emotional, and relational roles in consumer decision-making. The rise of consumer agency, particularly among Gen Z, marks another critical transition. Digitally native consumers co-create value through personalized feedback loops, dialogic interaction, and algorithmically assisted decision-making. This participatory dynamic not only blurs the line between producer and consumer but also positions AI as a co-producer in experience formation. The co-creative process is no longer dyadic (brand–consumer) but triadic (brand–consumer–AI), requiring netnographic inquiry to accommodate hybrid networks of interaction.

Methodologically, these developments necessitate a shift toward hybrid ethnographic practices. Computational netnography, characterized by the use of natural language processing, sentiment analysis, and machine learning, enables the scaling of qualitative insight while preserving contextual depth. Researchers must adopt data literacy and interpretive flexibility to navigate the intersection of algorithmic and human narratives. However, this shift also raises questions about reflexivity, authenticity, and the positionality of the researcher within algorithm-mediated contexts.

Ethical and epistemological concerns further complicate the integration of AI in netnographic inquiry. Issues such as algorithmic bias, data opacity, and manipulation jeopardize both the validity of research and the autonomy of consumers. The increasing entanglement of AI in the affective and symbolic dimensions of consumer life suggests that ethical safeguards must move from peripheral compliance to central design principles. Researchers must uphold

transparency, ensure informed consent in AI-mediated settings, and engage with normative debates surrounding algorithmic influence.

In sum, the convergence of AI and netnography challenges existing frameworks of consumer research. It calls for a reorientation of methods, theories, and ethical protocols that recognize the complexity of hybrid digital ecosystems. Future research must not only adapt to technological change but also interrogate the social and cultural implications of living, consuming, and co-creating alongside intelligent machines. This theme is critical as it reminds netnographic researchers that access $\neq$ legitimacy, and scale $\neq$ validity, especially when AI is used to mine and interpret consumer discourse.

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Research Gaps and Future Directions

Although scholarly interest in netnography and AI-driven consumer behavior has increased substantially, this review identifies several critical gaps that require further scholarly engagement to advance theoretical depth and methodological innovation.

Insufficient Longitudinal and Affective Perspectives

A significant proportion of existing studies adopt cross-sectional or snapshot-based designs, offering limited insight into the evolution of consumer–AI relationships over time. Furthermore, the emotional, symbolic, and experiential dimensions of AI-mediated interactions—such as trust formation, authenticity perception, and affective resonance—remain under-explored. This is particularly salient in contexts involving digital-native cohorts such as Generation Z, who engage extensively with AI-generated personas and influencers.

Future research should adopt longitudinal and interpretive netnographic approaches to examine how affective bonds with AI agents are established, maintained, and possibly disrupted over time.

Under-Theorization of Agentic Netnography

While the notion of AI as an interactive agent has gained conceptual traction, there remains a paucity of robust methodological frameworks that can accommodate non-human agency within netnographic inquiry. Prevailing approaches tend to be anthropocentric, lacking epistemological flexibility to account for algorithmic influence on meaning-making, identity construction, and behavioral co-creation in hybrid human–AI systems.

There is an urgent need to develop and refine netnographic protocols capable of recognizing and analyzing AI entities as co-participants in digital cultures.

Operational Gaps in Ethical Governance

Although ethical concerns, such as informed consent, algorithmic manipulation, data privacy, and power asymmetry are increasingly acknowledged, few studies provide explicit strategies to address them empirically. The opaque nature of AI systems exacerbates the challenge of maintaining participant autonomy and research transparency in digital ethnographic contexts.

Future studies should embed normative frameworks that emphasize algorithmic accountability, participatory consent models, and ethical co-design principles, ensuring responsible conduct in AI-mediated research environments.

Fragmentation Across Disciplinary Boundaries

The current literature often reflects disciplinary silos—technical studies emphasize computational design and functionality, while social science inquiries prioritize cultural meaning and user experience. This fragmentation limits the development of holistic models capable of integrating sociotechnical dynamics.

Scholars should pursue interdisciplinary methodologies that blend computational netnography, critical AI scholarship, and consumer behavior theory to generate more integrative and actionable insights.

Lack of Cross-Cultural and Contextual Diversity

The vast majority of empirical studies are conducted in Western digital ecosystems, resulting in a limited understanding of how AI and netnographic dynamics manifest in non-Western or underrepresented contexts. Cultural norms, infrastructure disparities, and socio-political structures significantly shape human–AI interaction and co-creation practices.

Cross-cultural and Global South-oriented netnographic investigations are essential to uncover contextual nuances and broaden the applicability of theoretical constructs.

Towards a Future Research Agenda

Moving forward, scholars are encouraged to embrace a more reflexive and future-facing research paradigm. This entails not only adapting methods but also rethinking theoretical assumptions about agency, affect, and ethics in AI-



augmented consumer contexts. Key research directions include:

- Reconceptualizing AI as a semiotic and relational actor in digital discourse,
- Developing frameworks for emotionally intelligent and affect-aware AI interaction,
- Advancing computational–qualitative hybrid methodologies that preserve depth and scalability,
- Institutionalizing ethical alignment at every stage of digital ethnographic design and execution.

While this review provides a comprehensive synthesis of literature at the intersection of netnography and AI-driven consumer behavior, several limitations should be acknowledged. First, the search was restricted to two major databases—Scopus and Web of Science—potentially excluding relevant studies indexed in other academic repositories. Second, only English-language and peer-reviewed journal articles were considered, which may have introduced a language and publication bias. Third, the thematic synthesis applied in this study relied on interpretive analysis rather than statistical meta-analysis, which limits the generalizability of the findings. Lastly, the rapid pace of technological development in AI may render some insights outdated in a short period, highlighting the need for continuous updating of literature in this domain.

Future reviews could adopt broader multilingual searches, incorporate grey literature, and explore hybrid methodological approaches combining qualitative synthesis with bibliometric or meta-analytic techniques.

CONCLUSION

This systematic literature review has critically examined how netnographic research has transformed in response to the growing influence of artificial intelligence in digital marketing. The evolution from observational to co-creative approaches reflects not only changes in consumer behavior but also the emergence of AI as a meaningful participant in brand-consumer interactions.

The analysis reveals that consumers are increasingly co-creating value alongside AI-driven systems, from personalized recommendations to interactive brand dialogues. Simultaneously, researchers are adapting netnographic methods to embrace computational tools, automated data analysis, and hybrid methodological designs that acknowledge both human and machine agency.

Nevertheless, this convergence introduces complex ethical and epistemological challenges. Issues such as algorithmic bias, loss of consumer autonomy, and the opacity of AI decision-making demand that scholars adopt a more critical and reflexive stance when deploying netnographic techniques in AI-rich environments.

To move forward, future research must explore new models of agentic netnography, investigate the emotional and symbolic dimensions of human–AI co-creation, and develop frameworks that integrate ethical design principles with computational ethnography. Interdisciplinary collaboration among marketers, technologists, and ethicists will be essential to ensure that AI-driven consumer engagement evolves in a direction that supports transparency, inclusivity, and long-term trust.

Understanding AI-driven consumer behavior requires more than tools, it demands a transformation in how we theorize, engage with, and ethically interpret the digital marketplace.

The study was co-conceptualized by both authors. The first author led the literature search and analysis, while the second author contributed to the framework development and manuscript refinement. Both authors approved the final version.

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