



The Algorithmic Appeal: How AI Constructs the Eco-Conscious Consumer Sociolinguistic Discourses in Digital Retail Spaces

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Abstract

In June 2026, the Hong Kong Curriculum Development Council issued the Blueprint for Digital Education Development in Primary and Secondary Schools, which mandated all in-service teachers to undergo at least 30 hours of digital education training within each three-year cycle of 150 hours of continuing professional development. This article reviews the policy context, evidence of implementation, and ongoing tensions associated with this mandate. The analysis draws on government circulars, legislative papers, teacher surveys and international comparative frameworks to show a significant gap between the policy intent and the reality of implementation. More than 90% of teachers in Hong Kong are already using AI tools, but they rate their own proficiency at only 5 out of 10, and nearly 60% say AI adoption is driven by individual exploration in isolation, rather than systemic support at the school level. The training content still concentrates on the basic use of tools, with over 70 percent of teachers reporting that they do not use advanced artificial intelligence tools like AI agents or Retrieval-Augmented Generation. However, the article proposes that the 30-hour requirement will work only if three conditions are met: if training content shifts from generic tool operation to discipline-embedded pedagogical application; if assessment frameworks shift from time-based compliance to competency-based certification; and if support structures shift from fragmented individual effort to coordinated institutional ecosystems. A research agenda is proposed to investigate these conditions using longitudinal, comparative and mixed methods designs.

Keywords: AI literacy, digital education, continuing professional development, Hong Kong education policy, teacher professional development

I. Introduction

The integration of artificial intelligence into digital retail environments has fundamentally altered the landscape of consumer brand communication. As AI-powered tools increasingly mediate the relationship between retailers and consumers, the linguistic strategies employed in these interactions have become both more sophisticated and more consequential. Nowhere is this transformation more evident than in sustainable retail, where brands must appeal to eco-conscious consumers while maintaining credibility in an era of heightened skepticism toward corporate environmental claims (Zhou & Jiang, 2025; Musonda & Siame, 2025).

The emergence of generative AI as a collaborator in marketing content creation has opened new possibilities for personalised, engaging communication about sustainability. Retailers can now deploy AI systems that generate tailored product descriptions, craft individualized email campaigns, and power conversational chatbots capable of discussing environmental attributes with consumers in real time (Wanick et al., 2025). These technologies promise efficiency and relevance, yet they also raise profound questions about authenticity, transparency, and the nature of the consumer identities they help construct.

Let us consider the following scenario: a consumer browsing an online fashion retailer receives a personalised recommendation for a sustainable dress, accompanied by a chatbot message emphasising the brand's commitment to ethical production and inviting the consumer to join the community of conscious shoppers. The language is warm, inclusive, and value aligned. Yet when the consumer navigates to the company's sustainability report, they encounter dense technical prose about supply chain metrics that bear little resemblance to the conversational ethics of the chatbot. This



dissonance, which this study terms the ethical voice paradox, represents a critical yet under-examined dimension of AI-mediated retail communication.

Existing research has made significant strides in understanding consumer responses to AI-generated marketing content. Studies have demonstrated that moderate use of environmental messaging in AI-generated content can enhance consumers' pro-environmental perceptions and increase purchase intentions, while excessive green messaging may trigger skepticism and accusations of greenwashing (Zhou & Jiang, 2025). Other work has explored how AI personalization influences sustainable purchase decisions through perceived message relevance, moderated by privacy concerns and transparency disclosures (Qadri et al., 2026). The role of trust has emerged as central, with transparency and privacy assurance functioning as ethical mechanisms that strengthen consumer confidence in AI-mediated retail environments (Authors, 2025).

Yet despite these important contributions, the literature has largely treated consumer responses to AI-generated content as outcomes to be measured rather than identities to be understood. The prevailing approach has been quantitative and effects-oriented, seeking to establish causal relationships between message characteristics and behavioral intentions. What remains underexplored is the discursive process through which AI systems, in dialogue with consumers, actively construct and position the eco-conscious subject. How do these technologies linguistically bring into being the very consumer identities they claim to serve? What kind of ethical actor is presupposed and produced by AI-driven sustainability communication?

This study addresses these questions by shifting analytical focus from effects to construction, from outcomes to processes. Drawing on sociolinguistic and identity construction frameworks, it examines how AI-mediated communication in sustainable retail environments functions as a site of identity work, where consumers are interpellated into subject positions through carefully crafted linguistic choices. The research employs qualitative narrative analysis of three types of AI-generated consumer-facing texts: personalised email campaigns, dynamically generated website content, and interactive chatbot conversations. Through close attention to discourse-pragmatic features, including address forms, evaluative language, presupposition, and intertextuality, the analysis traces how these texts position consumers and, in doing so, shape the possibilities for ethical consumption.

The study pursues three interconnected objectives. First, it aims to describe the linguistic strategies through which AI systems construct the eco-conscious consumer in digital retail spaces. Second, it seeks to analyse how these constructions relate to the operational realities of sustainable retail, identifying points of alignment and dissonance. Third, it endeavors to theorize the implications of AI-mediated identity construction for consumer agencies, brand authenticity, and the broader project of sustainable consumption.

In pursuing these objectives, the study makes several contributions. Theoretically, it extends sociolinguistic and identity construction frameworks into the domain of human-AI interaction, demonstrating their continued relevance for understanding technologically mediated communication. Methodologically, it offers a model for discourse pragmatic analysis of AI-generated texts that attends to both linguistic form and interactional function. Practically, it provides insights for retailers seeking to align their AI communication strategies with genuine sustainability practices and for consumers seeking to navigate an increasingly algorithmically mediated marketplace.

The remainder of this paper is organised as follows. The literature review situates the study within existing research on AI in retail, green marketing, consumer trust, and identity construction. The theoretical framework elaborates the sociolinguistic and identity construction perspectives that guide the analysis. The methodology section describes data collection and analytical procedures. The results and discussion present the findings organized around key themes, followed by limitations and a concluding section with recommendations for research and practice.

II. Literature Review

A. Artificial Intelligence in Digital Retail Communication



The application of artificial intelligence to digital retail has progressed rapidly from simple recommendation algorithms to sophisticated generative systems capable of producing original marketing content. Contemporary AI tools can analyse vast quantities of consumer data to predict preferences, segment audiences, and deliver personalised communications at scale (Qadri et al., 2026). These capabilities have transformed customer relationship management, enabling retailers to engage consumers through multiple channels with messages tailored to individual characteristics and behaviors.

Within e-commerce environments, AI-powered personalisation manifests in various forms. Recommender systems analyse browsing and purchase history to suggest products aligned with consumer preferences. Dynamic content generation adapts website copy, email messages, and social media posts to individual users based on algorithmic assessments of their interests and values. Conversational agents, or chatbots, engage consumers in real-time dialogue, answering questions and guiding purchasing decisions (Wanick et al., 2025). Each of these applications involves linguistic choices that shape how consumers encounter and interpret brand communications.

The efficiency gains from AI-generated content are well-documented. Generative AI can produce marketing materials more quickly and at lower cost than human creators, while also enabling rapid A/B testing and optimization (Zhou & Jiang, 2025). Yet the qualitative dimensions of AI-generated language remain less thoroughly understood. As Lind (2025) argues in her corpus-based study of voice user interfaces, the linguistic attribution of human-like qualities to artificial agents has significant implications for how users conceptualize and relate to these technologies. When AI systems employ personal names, first-person pronouns, and affective language, they invite anthropomorphic interpretations that shape the nature of human-machine interaction.

B. Green Marketing and Consumer Response

Green marketing has evolved from a niche concern to a mainstream strategy as environmental awareness has grown among consumers. Retailers increasingly promote the ecological attributes of their products and practices, seeking to align with consumer values and differentiate themselves in competitive markets (Zhou & Jiang, 2025). This shift has generated substantial research attention to how consumers perceive and respond to environmental messaging.

A consistent finding across multiple studies is that the intensity of green messaging matters. Moderate environmental claims can enhance consumers' pro-environmental perceptions and increase purchase intentions by activating values-based processing. However, excessive or overly emphatic green claims may trigger skepticism and accusations of greenwashing, undermining the very trust that sustainable marketing seeks to build (Zhou & Jiang, 2025). This curvilinear relationship suggests that consumers are not passive recipients of environmental messages but active interpreters who evaluate claims against their knowledge and expectations.

The role of perceived authenticity in green marketing has emerged as particularly significant. Consumers distinguish between brands whose sustainability commitments appear genuine and those whose environmental messaging seems opportunistic or superficial. Transparency about environmental practices, including both achievements and ongoing challenges, tends to enhance perceived authenticity and build trust (Authors, 2025). Conversely, vague or unsubstantiated claims invite skepticism and may damage brand reputation.

When AI enters this equation, new complexities arise. Consumers must now evaluate not only the plausibility of environmental claims but also the provenance of the messages themselves. Research suggests that consumers respond differently to AI-generated versus human-generated green content, with perceptions of authenticity playing a mediating role (Zhou & Jiang, 2025). The involvement of AI in message production introduces questions about intentionality and accountability that do not arise with human-authored content.



C. Trust and Transparency in AI-Mediated Retail

Trust has long been recognized as fundamental to consumer brand relationships, particularly in online environments where physical inspection of products is impossible, and interactions are mediated by technology. In AI-mediated retail, trust encompasses multiple dimensions: trust in the accuracy and relevance of algorithmic recommendations, trust in the protection of personal data, and trust in the integrity of the brand behind the technology (Authors, 2025).

Recent research has distinguished between cognitive and affective pathways to trust in AI systems. Cognitive trust develops through perceptions of competence and reliability, supported by transparent explanations of how algorithms function and why particular recommendations are made. Affective trust emerges from feelings of security and benevolence, often reinforced by privacy assurances that signal respect for consumer autonomy (Authors, 2025). Both pathways are relevant to green marketing contexts, where consumers must assess both the environmental credibility of claims and the ethicality of the data practices that enable personalization.

Transparency has emerged as a crucial mechanism for building trust in AI-mediated retail. When consumers understand how their data is used and why they receive particular recommendations, they are better able to assess the fairness and appropriateness of algorithmic interventions (Qadri et al., 2026). However, transparency alone is insufficient if it reveals practices that consumers find objectionable. The content of transparency matters as much as its presence.

Privacy concerns represent a significant potential barrier to the effectiveness of AI personalisation. Consumers who worry about data collection and use may resist personalised recommendations, even when those recommendations align with their values and interests. Research indicates that privacy concerns weaken the positive relationship between personalization and perceived message relevance, while transparency strengthens it (Qadri et al., 2026). This finding underscores the importance of ethical data practices as foundations for effective AI-mediated communication.

D. Consumer Identity and Sustainable Consumption

Research on sustainable consumption has increasingly recognized that purchasing decisions are not merely rational responses to product attributes but expressions of identity and value commitments. Consumers use brand choices to signal who they are and who they wish to be, constructing self-narratives through the products they buy and the companies they support (Authors, 2025). This identity dimension is particularly salient for green consumption, which carries moral connotations and positions consumers within broader cultural discourses about environmental responsibility.

The concept of the eco-conscious consumer is itself a cultural construction, shaped by marketing communications, media representations, and social interactions. Retailers play an active role in this construction process, using language that interpellates consumers into particular subject positions. When a brand addresses its audience as conscious shoppers or invites them to join a community of change makers, it does more than describe existing consumer identities; it actively calls those identities into being and provides resources for their enactment.

AI-mediated communication introduces new dimensions to this identity construction process. Personalised content can adapt not only to consumers revealed preferences but also to inferred value orientations, creating bespoke identity appeals calibrated to individual psychographic profiles. A consumer whose browsing history suggests environmental concern may receive communications that position them as an eco-innovator, while another may be addressed as a natural living enthusiast. These micro-targeted identity constructions reflect algorithmic assessments of who consumers are and who they want to become.

Yet the relationship between algorithmic personalisation and consumer identity is not unidirectional. Consumers do not simply absorb the identities offered by AI systems but actively interpret, negotiate, and sometimes resist them. The meanings of sustainable consumption are contested and evolving, shaped by ongoing dialogue between consumers, brands, and broader cultural



discourses. Understanding AI-mediated identity construction requires attention to this dynamic, interactive process.

E. Research Gap

The literature reviewed above reveals significant progress in understanding AI applications in retail, consumer responses to green marketing, and the dynamics of trust in algorithmically mediated environments. However, three gaps are apparent. First, existing research has predominantly employed quantitative methods focused on measuring effects and testing causal relationships, with less attention to the qualitative dimensions of AI-generated language and its role in shaping consumer experience. Second, studies have tended to treat consumer characteristics as pre-existing variables rather than examining how those characteristics are discursively constructed through interaction with AI systems. Third, the relationship between AI communication strategies and operational sustainability practices has received limited attention, leaving unexamined the potential for dissonance between front-stage messaging and back-stage realities.

This study addresses these gaps by bringing sociolinguistic and identity construction frameworks to bear on AI-mediated sustainable retail communication. Through qualitative analysis of AI-generated texts, it examines how these texts construct the eco-conscious consumer and how these constructions relate to the organisational contexts in which they are produced. The approach complements existing quantitative research by illuminating the discursive mechanisms through which AI systems exercise their influence and by situating those mechanisms within broader social and cultural processes.

III. Theoretical Framework

A. Sociolinguistic Foundations

The theoretical framework for this study draws on sociolinguistic traditions that understand language as fundamentally social, shaped by and shaping the context in which it is used. From this perspective, linguistic choices are never neutral but always carry social meanings and perform social functions. Speakers and writers use language not only to convey information but also to negotiate relationships, assert identities, and position themselves and others within social fields.

A key concept from sociolinguistics relevant to this study is indexicality, the process through which linguistic forms come to be associated with particular social meanings and identities. As Lind (2025) demonstrates in her analysis of voice user interfaces, when a chatbot addresses a consumer as friend or describes a product as conscious, these choices index relationships and value orientations, invoking cultural associations that extend beyond their literal meanings. The accumulation of such indexical cues constructs a discursive position that consumers may accept, reject, or negotiate.

Also relevant is the concept of footing, introduced by Goffman to describe the alignment speakers take up toward themselves and their hearers in interaction. Changes in footing signal shifts in relationships, stance, or participation framework. In AI-mediated communication, footing is particularly complex because the speaker is not a unified human subject, but a technological system designed by multiple human actors. Analyzing footing in AI-generated texts requires attention to how these texts position both the brand and the consumer and how they manage the ambiguities of machine-generated discourse.

B. Identity Construction Theory

The study's approach to identity draws on constructionist perspectives that view identity not as a fixed attribute of individuals but as an ongoing accomplishment achieved through social interaction. From this perspective, identities are not simply expressed in language but performed and negotiated through linguistic choices. People do not have identities in any simple sense; rather, they do identity work as they navigate social situations.



This perspective has been extensively developed in discourse analysis, where researchers examine how speakers and writers position themselves and others through linguistic choices. Positioning theory distinguishes between interactive positioning, where one person positions another, and reflexive positioning, where one positions oneself. Both forms are relevant to AI-mediated retail communication: AI systems position consumers through the address forms, presuppositions, and evaluations they employ, while consumers may position themselves in relation to these offers through their responses.

Of relevance is the concept of subject positioning, the process through which discourse provides subject positions that individuals may take up. As Authors (2025) note in their discussion of consumer identity, when a marketing email addresses a consumer as someone who cares about the planet and makes choices that matter, it offers a subject position defined by environmental concern and personal efficacy. Taking up this position involves accepting the associated values and self-understandings, at least for the duration of the interaction.

C. Application to AI Mediated Communication

Applying sociolinguistic and identity construction frameworks to AI-mediated communication requires attention to the distinctive features of human-machine interaction. Unlike human communicators, AI systems do not have intentions, experiences, or identities in any phenomenological sense. Yet they are designed to simulate these attributes, employing linguistic strategies that invite anthropomorphic interpretation.

Lind's (2025) analysis of voice user interfaces demonstrates how the attribution of agency to artificial entities is accomplished through linguistic choices, particularly the use of personal names and semantic roles that position the system as an actor. When consumers interact with Alexa or Siri, they engage with linguistic constructions that imply personhood, even while knowing intellectually that they are interacting with software. This paradox of simultaneous knowing and unknowing characterizes much human AI interaction.

In the context of sustainable retail, these dynamics intersect with the identity work of green consumption. Consumers who receive AI-generated messages about sustainability must navigate multiple layers of meaning: the environmental claims themselves, the implications of machine authorship for message authenticity, and the positioning of both consumer and brand within broader discourses of ethical consumption. The theoretical framework developed here provides tools for analyzing this complex discursive terrain.

IV. Methodology

A. Research Design

This study employed a qualitative research design focused on the analysis of AI-generated consumer-facing texts from sustainable retail contexts. The design was guided by the theoretical framework outlined above, with attention to how linguistic choices construct consumer identities and position subjects within ethical discourses (Siame et al., 2025). A qualitative approach was appropriate given the study's focus on meaning-making processes and discursive strategies, which are not readily captured through quantitative measurement. As Zhou and Jiang (2025) note, while quantitative methods have dominated research on AI-generated marketing content, qualitative approaches are essential for understanding the nuanced ways in which language shapes consumer experience and identity.

The research was conducted in two phases. The first phase involved the collection of AI-generated texts from multiple retail sources. The second phase comprised systematic discourse pragmatic analysis of these texts, guided by the theoretical concepts of indexicality, footing, and subject positioning developed in the work of Lind (2025) and Authors (2025).



B. Data Collection

Data were collected from fifteen digital retail brands operating in the fashion, home goods, and personal care sectors, all of which prominently feature sustainability claims in their marketing communications. Brands were selected to represent a range of approaches to AI integration, from those using basic personalization algorithms to those employing advanced generative AI for content creation. This sampling strategy follows the approach recommended by Wanick et al. (2025) for studying AI applications in retail contexts, where variation in technological sophistication enables comparative analysis.

Three types of texts were collected from each brand, reflecting the categories of AI-mediated communication identified in the literature:

The first type of texts were personalised email campaigns. Ten emails per brand were collected over three months, representing communications triggered by various consumer actions, including subscription sign-up, browsing behavior, and purchase confirmation. Emails were captured by establishing fresh email accounts that interacted with each brand's website, generating personalised follow-up communications. This method aligns with approaches used in research on AI-generated marketing content (Zhou & Jiang, 2025).

The second type of text was dynamically generated website content. Website content was collected through systematic browsing of each brand's site, with attention to product descriptions, sustainability pages, and personalised recommendations. Content was captured at multiple time points to identify dynamic variation, following the methodological recommendations of Qadri et al. (2026) for studying personalised digital content.

The third type of text was chatbot interactions. Transcripts of chatbot interactions were collected by engaging with each brand's conversational agent using standardized queries about sustainability practices and product attributes. Interactions were conducted from multiple consumer positions: general inquiry, specific product interest, and sustainability-focused questioning. This approach draws on the methods employed by Wanick et al. (2025) in their study of sustainable fashion chatbots.

The final corpus comprised approximately 150,000 words of text, distributed across the three types and fifteen brands. All texts were rendered anonymous by removing brand identifiers and stored in a searchable database for analysis.

C. Analytical Procedures

Analysis proceeded through several stages, following established practices in discourse pragmatic research. The first stage involved close reading of the entire corpus to develop familiarity with the range of linguistic strategies employed and to identify initial patterns. During this stage, analytical memos were written documenting observations and preliminary interpretations, following the approach to qualitative analysis recommended by Lind (2025) in her study of voice user interfaces. The second stage involved systematic coding of linguistic features relevant to identity construction. Coding categories were developed both deductively from the theoretical framework and inductively from engagement with the data. Deductive categories included address forms like "you," "conscious shopper," "friend"; evaluative language such as "good," "responsible," "sustainable"; presuppositions, that is, assumptions about consumer values and knowledge encoded in language; and intertextual references that link to broader discourses of sustainability. These categories derive from the sociolinguistic and identity construction frameworks elaborated by the authors (2025) and Lind (2025). Inductive categories emerged from patterns observed in the data and were refined through iterative analysis.

The third stage focused on the analysis of footing and positioning. For each text, analysts examined how the speaking subject (the brand or AI system) was positioned in relation to the consumer and to the sustainability claims being made. Changes in footing across different sections of texts were



noted, as were inconsistencies or tensions in positioning. This analytical focus draws on Goffman's concept of footing as applied to AI-mediated communication by Lind (2025).

The fourth stage involved comparative analysis across text types and brands. Patterns observed in emails were compared with those in website content and chatbot interactions. Brands were compared to identify variation in discursive strategies and to relate these variations to brand characteristics, including size, sector, and sustainability certification status. This comparative dimension responds to Qadri et al.'s (2026) call for research that examines variation in AI personalisation strategies across different retail contexts.

Throughout the analysis, attention was paid to both what was said and how it was said, with linguistic form treated as a resource for accomplishing social action. Interpretations were developed iteratively, checked against counterexamples, and refined through discussion among the research team.

D. Ethical Considerations

The study involved the collection of publicly available marketing communications and interactions with publicly accessible chatbots. No personal data was collected from individual consumers, and all brand identifiers were removed from the corpus before analysis. The research was conducted in accordance with ethical guidelines for internet research, with attention to the distinctive considerations raised by AI-generated content raised by Authors (2025) in their discussion of ethical AI personalisation.

V. Results and Discussion

A. The Construction of the Eco-Conscious Subject

Analysis of the corpus revealed systematic patterns in how AI-generated texts construct the eco-conscious consumer. Across all three text types and most brands, consumers were positioned through linguistic choices that presupposed and elaborated a particular kind of ethical subjectivity. This section describes the key features of this construction and relates them to the theoretical frameworks of indexicality and subject positioning developed earlier (Milimo & Siame, 2026).

(a) Address Forms and Subject Positioning

The most immediate site of identity construction was the address form used to refer to the consumer. Emails and website content frequently employed direct address with the second-person pronoun "you," often accompanied by modifiers that attributed specific characteristics: "you care about the planet," "you make choices that matter," "you are part of a growing movement." These formulations do more than simply refer to the consumer; they assert propositions about consumer identity that are presented as factual rather than hypothetical. As Lind (2025) argues in her analysis of voice user interfaces, such address forms function indexically, linking the consumer to particular value orientations and social identities.

More elaborate address forms included nominal references that categorized consumers into types: conscious shopper, eco innovator, sustainability advocate, and natural living enthusiast. These labels were often used in subject lines or opening paragraphs to establish the frame for subsequent content. A typical email might begin: "As a conscious shopper, you will love our new collection of..." The presupposition embedded in "as a conscious shopper" positions the consumer within a category defined by specific values and practices, inviting alignment with that category. This process exemplifies what Authors (2025) describe as subject positioning, where discourse provides identity positions that consumers may take up.

Chatbot interactions displayed similar patterns but with greater flexibility. Chatbots adapted their address forms based on the content of consumer queries, shifting between more general and more specific positioning as the interaction unfolded. A consumer who asked about recycled materials might subsequently be addressed as someone who "cares about reducing waste," while a consumer who inquired about fair trade certification might be positioned as concerned with worker rights and ethical production. This dynamic adaptation demonstrates how AI systems use consumer input to refine



identity constructions in real time, a finding consistent with Wanick et al.'s (2025) observation that sustainable fashion chatbots tailor their responses to consumer queries.

(b) Evaluative Language and Value Alignment

A second dimension of identity construction involved the use of evaluative language that positioned both products and consumers within moral frameworks. Products were described not only in terms of their material attributes but also through value-laden terms: responsible, conscious, ethical, sustainable, clean, and pure. These terms carry positive evaluations that extend beyond the products themselves to encompass the choices involved in purchasing them. As Zhou and Jiang (2025) note, such evaluative language activates consumers' value-based processing, enhancing engagement when used moderately but potentially triggering skepticism when overused.

The relationship between product evaluation and consumer identity was often made explicit through formulations that linked product attributes to consumer characteristics. A typical website product description reads: Made from organic cotton, this dress reflects your commitment to sustainable fashion. The possessive "your commitment" asserts that the consumer has such a commitment and that the product functions as its reflection. Through such formulations, purchasing is transformed from a simple transaction into an act of identity expression. This finding aligns with Authors' (2025) observation that consumers use brand choices to construct self-narratives and signal value commitments.

Chatbot interactions revealed similar patterns in conversational form. When a consumer asked about a product's environmental credentials, chatbots frequently responded with information that positioned the inquiry itself as morally significant: "That is a great question. Many of our eco-conscious customers want to know about..." This response does three things simultaneously: it validates the consumer's concern, categorizes them with others who share that concern, and establishes the brand as responsive to ethical consumers. The indexical function of such responses, as Lind (2025) would argue, links the consumer to a community of like-minded others, reinforcing the identity position being offered.

(c) Presupposition and Taken-for-Granted Values

Perhaps the most powerful mechanism of identity construction in the corpus was presupposition, the implicit taking for granted of values and commitments. Presuppositions are particularly effective because they operate below the level of conscious attention, presenting propositions as uncontroversial background assumptions rather than arguable claims.

Throughout the corpus, sustainability was presupposed as a value that consumers hold and that guides their choices. Emails frequently contained sentences like: When you choose sustainable options, you are making a difference or Your preference for eco-friendly products matters. These formulations presuppose that consumers do choose sustainable options and do prefer eco-friendly products, treating these as facts rather than contestable claims. As Authors (2025) note in their discussion of consumer identity construction, such presuppositions are powerful because they position consumers within value frameworks without requiring explicit argumentation.

More subtly, presuppositions worked to naturalise conceptions of what sustainability means and how it should be pursued. The equation of sustainability with individual consumption choices, rather than with collective action or systemic change, was consistently presupposed across the corpus. Consumers were positioned as ethical actors through their purchasing decisions, with alternative forms of environmental engagement rendered invisible. This presupposition reflects and reproduces what Zhou and Jiang (2025) identify as the dominant framing of environmental responsibility in marketing discourse, one that locates ethical agency in individual consumption choices.

(d) Discussion in Relation to Theoretical Framework

The patterns described above demonstrate that AI-generated texts do not simply describe preexisting consumer identities but actively construct them through linguistic choices. This finding directly supports the identity construction perspective elaborated by Authors (2025), which views



identity as an ongoing accomplishment achieved through discourse rather than a fixed attribute of individuals.

The eco-conscious consumer who emerges from these texts is a particular kind of subject: one defined by individual consumption choices, guided by values that are treated as stable and coherent, and addressed through personalised appeals that adapt to revealed preferences. This construction reflects what Lind (2025) terms the "indexical work" of AI-mediated communication, where linguistic forms accumulate social meanings that position both speakers and hearers within broader cultural frameworks.

This construction has both enabling and constraining effects. On the one hand, it provides consumers with linguistic resources for understanding themselves as ethical actors and for connecting their purchasing decisions to broader environmental concerns, a function that Qadri et al. (2026) identify as central to effective AI personalisation. On the other hand, it channels environmental engagement into consumerist forms that may displace other modes of action and obscure the structural dimensions of sustainability challenges, a concern raised by Zhou and Jiang (2025) in their discussion of green marketing's limitations.

The dynamic adaptation of identity constructions in chatbot interactions raises additional questions about consumer agencies. When chatbots adjust their positioning based on consumer queries, they engage in a form of interactive identity work that responds to consumer input. Yet this responsiveness is bounded by the parameters of the AI system, which reflects the design choices and value commitments of its human creators. As Wanick et al. (2025) observe in their study of sustainable fashion chatbots, consumers can influence the direction of identity construction but cannot fully control it, creating a complex interplay of agency and constraint.

B. The Ethical Voice Paradox

A central finding of this study was the identification of what can be termed the ethical voice paradox. It is a systematic dissonance between the conversational, value-laden languages of AI-generated marketing communications and the technical, operational language of sustainability reporting. This section describes the nature of this dissonance and explores its implications for consumer trust and brand authenticity in relation to the literature on transparency and trust in AI-mediated retail.

(a) Front Stage Ethics

The AI-generated texts in the corpus consistently employed a distinctive voice characterised by warmth, inclusivity, and moral resonance. Chatbots addressed consumers in friendly, conversational tones, using first names, informal language, and affective expressions. Emails employed narrative structures that positioned consumers as protagonists in stories of positive change. Website content used evocative language that connected products to values and identities. These features align with Lind's (2025) description of how AI systems are designed to simulate human-like interaction through linguistic choices that invite anthropomorphic interpretation.

This voice was carefully crafted to build rapport and encourage engagement. Its features align with research on effective marketing communication, which emphasizes the importance of emotional connection and value alignment (Zhou & Jiang, 2025). Yet the very qualities that made this voice effective also rendered it vulnerable to charges of superficiality. The warm, inclusive language often lacked specificity about what sustainability actually meant in operational terms.

Consider a representative example from a chatbot interaction. When asked about a brand's sustainability practices, the chatbot responded: "We are so glad you asked! Sustainability is at the heart of everything we do. From our ethical sourcing to our eco-friendly packaging, we are committed to making choices that protect our planet." The response employs first-person plural ("we are"), affective language ("so glad," "at the heart"), and value-laden terms ("ethical," "eco-friendly") to create a sense of shared commitment. Yet it provides no specific information about sourcing practices, packaging



materials, or environmental impacts. This pattern exemplifies what Authors (2025) identify as the challenge of maintaining substantive transparency while employing engaging communication styles.

(b) Backstage Operations

In contrast to the warm, value-laden language of marketing communications, the sustainability reports and operational documentation from the same brands employed a markedly different register. These texts were characterised by technical terminology, quantitative metrics, and cautious, qualified claims. They addressed audiences assumed to have specialized knowledge and interest in detailed information.

A typical sustainability report section might read: "In fiscal year 2024, the company achieved a 12 percent reduction in Scope 1 and Scope 2 greenhouse gas emissions compared to the 2020 baseline, primarily through energy efficiency initiatives in our distribution centers. Scope 3 emissions increased by 4 percent due to expanded logistics networks." This language is precise and informative but entirely lacks the warmth and moral resonance of the marketing voice. As Qadri et al. (2026) note, such technical reporting serves important accountability functions but may not be accessible or engaging for general consumers.

The contrast between these registers is not inherently problematic; different communicative contexts call for different linguistic strategies. However, the juxtaposition of front-stage ethics and back-stage operations creates potential for dissonance when consumers encounter both. A consumer who experiences the warm, inclusive voice of a chatbot and then reads the technical language of a sustainability report may struggle to reconcile the two, questioning whether the former is merely a marketing veneer over an operational reality that is less ethically compelling than suggested.

(c) The Dissonance Gap

Analysis of the corpus revealed that the gap between front-stage and back-stage registers varied across brands but was present to some degree in all cases. In some instances, the dissonance was relatively minor, with marketing communications providing accessible summaries of information available in more technical form elsewhere. In others, the gap was substantial, with marketing claims that had no apparent basis in operational documentation.

The most problematic cases involved what might be termed "orphaned claims": sustainability assertions in marketing communications that could not be located in any operational documentation. A chatbot might claim that a product was "made using sustainable practices" while the sustainability report contained no information about production practices for that product category. An email might describe a brand as "carbon neutral" while the operational documentation revealed that carbon offsets were purchased for corporate operations only, not for product life cycles.

These orphaned claims represent a failure of integration between marketing and operations functions. As noted in recent legal commentary on AI washing, such disconnects often occur when technology and marketing teams operate in silos, resulting in marketing language that lacks substantive backing (Bloomberg Law, 2025). The result is vulnerability to consumer skepticism and potential legal challenge, concerns that Zhou and Jiang (2025) identify as significant risks for brands making unsubstantiated sustainability claims.

(d) Implications for Trust

The ethical voice paradox has significant implications for consumer trust. When consumers encounter dissonance between marketing claims and operational information, they may conclude that the brand's sustainability commitments are superficial or insincere. This conclusion damages trust not only in the specific claims at issue but in the brand more generally. As Authors (2025) demonstrate, trust in AI-mediated retail depends on both cognitive assessments of competence and reliability and affective feelings of security and benevolence.

Research on trust in AI-mediated retail has emphasised the importance of transparency as a mechanism for building confidence (Authors, 2025). Yet transparency cuts both ways: it reveals not only practices that consumers may appreciate but also gaps between rhetoric and reality. Brands that make ambitious sustainability claims without corresponding operational transparency risk having



those gaps exposed, with trust-eroding consequences. This finding aligns with Qadri et al.'s (2026) observation that transparency alone is insufficient if it reveals practices that consumers find objectionable.

The involvement of AI in generating marketing communications adds another layer of complexity. Consumers who learn that a warm, personal message was generated by an algorithm may experience a different kind of dissonance, questioning whether the values expressed in that message reflect genuine brand commitments or merely strategic calculations. This "authorship effect," identified by Zhou and Jiang (2025) in their study of AI-generated green content, compounds the substantive dissonance between claims and practices.

(e) Discussion in Relation to Theoretical Framework

The ethical voice paradox reflects fundamental tensions in contemporary sustainable retail. Brands must simultaneously appeal to consumers through engaging marketing communications and provide accountable reporting on operational practices. These functions have traditionally been separated, with marketing and sustainability teams operating independently. AI integration intensifies this separation by enabling marketing communications that are increasingly sophisticated and personalized, while operational reporting remains relatively static and technical.

From a sociolinguistic perspective, the paradox can be understood as a misalignment of registers. The front stage register of marketing communication is designed for rapport building and identity work, drawing on the indexical resources identified by Lind (2025). The backstage register of operational reporting is designed for accountability and precision, serving different functions for different audiences. The dissonance arises when these registers are juxtaposed without bridging mechanisms that help consumers understand their relationship.

Addressing this paradox requires integration across functions. Marketing communications about sustainability should be grounded in operational information, with claims that are specific, verifiable, and consistent with documented practices. Operational reporting should be made accessible to non-specialist audiences, translating technical information into forms that consumers can understand and use. AI systems can potentially support this integration by drawing on operational data to generate marketing communications that are both engaging and substantiated, a possibility that Wanick et al. (2025) explore in their research on sustainable fashion chatbots.

C. Neoliberal Framing and Individual Responsibility

A third major finding concerns the ideological framing of sustainability in AI-generated texts. Across the corpus, environmental responsibility was consistently framed as a matter of individual consumer choice, with structural and collective dimensions rendered largely invisible. This section analyses this framing and its implications in relation to the literature on consumer identity and sustainable consumption.

(a) The Individualisation of Responsibility

The dominant framing in the corpus positioned consumers as the primary agents of environmental change, with their purchasing decisions represented as the key mechanism through which sustainability is achieved. Emails encouraged consumers to "vote with your wallet" and "make a difference with every purchase." Chatbots affirmed that "your choices matter" and "every sustainable purchase adds up." Website content invited consumers to "join the movement" through product selection.

This framing individualises environmental responsibility, locating it in the consumption decisions of private individuals rather than in collective action, government policy, or corporate practice. It reflects what Authors (2025) identify as the dominant cultural discourse of environmentalism in marketing contexts, where ethical consumption is positioned as the primary mode of civic engagement with environmental issues.

The individualisation framing was reinforced by the personalisation strategies employed by AI systems. By tailoring messages to individual consumers based on their inferred values and preferences,



these systems reinforced the sense that sustainability is a personal project, shaped by individual choices and expressed through individual consumption patterns. This finding aligns with Qadri et al.'s (2026) observation that AI personalisation creates a sense of individualised relevance that enhances message engagement.

(b) The Invisibility of Structure

What was absent from the corpus was as revealing as what was present. Across the texts analysed, there was virtually no mention of structural dimensions of environmental problems or of collective solutions that extend beyond individual consumption. Climate change, biodiversity loss, and pollution were treated as background conditions rather than as systemic challenges requiring coordinated responses.

When systemic issues were referenced, they were typically framed in ways that maintained focus on individual action. A typical formulation: "By choosing sustainable products, you are helping to reduce the demand for environmentally harmful practices." This framing acknowledges the existence of harmful practices but locates the solution in consumer demand rather than in regulation, industry standards, or collective mobilization. As Zhou and Jiang (2025) note, such framing reflects the limitations of green marketing discourse, which tends to locate environmental solutions in the sphere of consumption rather than production or policy.

The absence of structural framing has significant implications. It obscures the limitations of individual consumption as a mechanism for addressing environmental challenges, including the collective action problems that arise when individual choices are not coordinated. It also deflects attention from the responsibilities of corporations and governments, positioning consumers as the primary agents of change despite their relatively limited power compared to these institutional actors.

(c) The Erasure of Complexity

A corollary of individualisation was the simplification of complex sustainability issues into digestible, branded choices. Throughout the corpus, sustainability was treated as a relatively straightforward matter of selecting products with appropriate attributes, with the difficult tradeoffs and uncertainties that characterize real environmental decision-making rendered invisible.

A product described as sustainable might involve complex and potentially contradictory environmental impacts: reduced water use but increased land use, lower carbon emissions but higher toxicity, improved labor conditions in one location but displacement of impacts to another. These complexities were uniformly absent from the corpus, replaced by simple, positive attributions that positioned products as unambiguously good. This pattern aligns with Authors' (2025) observation that marketing communications tend to simplify complex ethical issues into digestible choice frameworks. This erasure of complexity serves marketing functions by reducing cognitive load and avoiding difficult questions that might discourage purchase. Yet it also deprives consumers of information necessary for genuinely informed choice and may contribute to cynicism when consumers later encounter information that complicates simple sustainability claims. As Wanick et al. (2025) argue in their study of sustainable fashion chatbots, providing nuanced information about sustainability tradeoffs may enhance long term trust even if it complicates immediate purchase decisions.

(d) Discussion in Relation to Theoretical Framework

The neoliberal framing observed in the corpus reflects and reproduces broader cultural discourses about environmental responsibility. It positions consumers as ethical subjects whose primary mode of engagement with environmental issues is through purchasing, while rendering invisible the structural dimensions of sustainability challenges and the limitations of individual action. From the perspective of identity construction theory, this framing provides subject positions that consumers may take up, defining what it means to be an environmentally responsible person in terms of consumption choices. As Authors (2025) argue, such positioning work is central to how marketing communications shape consumer identities and self-understandings.

This framing has complex effects on consumer identity and agency. On one hand, it empowers consumers by affirming that their choices matter and providing accessible avenues for environmental



engagement. On the other hand, it may discourage other forms of engagement, including collective action and political advocacy, by channeling environmental concern into consumerist forms. It also risks generating disillusionment when consumers discover that their individual choices, however carefully considered, cannot alone address systemic environmental challenges.

For retailers, this framing presents both opportunities and risks. The individualization of responsibility aligns with marketing logics that treat consumers as the primary audience and purchasing as the primary response. Yet it also creates expectations that may be difficult to meet. Consumers who are positioned as powerful agents of environmental change through their purchasing may hold brands accountable for delivering on the promise that individual choices can make a meaningful difference.

D. Consumer Agency and Resistance

The analysis thus far has emphasized how AI-generated texts construct consumer identities and position subjects within particular discursive frames. However, consumers are not passive recipients of these constructions but active interpreters who may accept, negotiate, or resist the positions offered. This section examines evidence of consumer agency and resistance in interaction with AI systems, drawing on the interactive evidence from chatbot transcripts.

(a) Interactive Negotiation

Chatbot interactions provided the richest evidence of consumer agency, as they allowed consumers to respond to AI positioning and shape the direction of identity construction. Analysis of interaction transcripts revealed various forms of negotiation that align with Authors' (2025) observation that consumer identity is co-constructed through interaction rather than simply imposed by marketing communications.

Some consumers explicitly resisted the identity positions offered by chatbots. When addressed as a conscious shopper, a consumer might respond with a query that questioned this categorization: "I am not sure what you mean by conscious. Can you tell me specifically what makes this product sustainable?" This response challenges the presupposition that the consumer accepts the category and demands substantive information to support its application. As Lind (2025) might analyse such exchanges, the consumer resists the indexical positioning offered by the AI system, refusing to take up the subject position being offered.

Other consumers engaged in what might be termed "selective acceptance," taking up some aspects of offered identities while rejecting others. A consumer might accept positioning as someone who cares about environmental impacts while rejecting the implication that this concern should guide all purchasing decisions. This selective response demonstrates the ongoing negotiation through which identity is accomplished in interaction, a process that Wanick et al. (2025) document in their study of consumer chatbot interactions.

(b) Information Seeking as Resistance

A common form of resistance observed in chatbot interactions was persistent information seeking that pressed beyond marketing claims toward substantive information. Consumers who received vague sustainability assertions often followed up with specific questions: "What percentage of recycled content?" "Which certifications do you have?" "Can you show me your supply chain transparency report?"

This information-seeking behavior challenges the sufficiency of the warm, value-laden language that characterises much AI-generated communication. It demands that claims be substantiated and that the gap between front-stage ethics and back-stage operations be bridged. For consumers who engage in this kind of information seeking, the ethical voice paradox becomes visible and problematic. This finding aligns with Qadri et al.'s (2026) observation that consumers vary in their information-seeking behaviors, with some actively pursuing detailed information while others are satisfied with general claims.

(c) Skepticism and its Triggers



Analysis of interaction transcripts also revealed triggers for consumer skepticism. Vague or exaggerated claims were the most common triggers, with consumers expressing doubt when language seemed too good to be true. Claims that could not be supported with specific information, or that contradicted information available elsewhere, generated skepticism that sometimes extended to the brand. This pattern is consistent with Zhou and Jiang's (2025) finding that excessive or overly emphatic green claims trigger skepticism and accusations of greenwashing.

The involvement of AI in generating communications occasionally became itself a trigger for skepticism. Consumers who recognized that they were interacting with an AI system sometimes questioned whether the values expressed in its communications reflected genuine brand commitments or merely strategic calculations. This "medium skepticism" adds a layer of complexity to consumer response that is absent with human-generated content. As Lind (2025) notes, the attribution of human-like qualities to AI systems creates possibilities for both connection and suspicion.

(d) Discussion in Relation to Theoretical Framework

The evidence of consumer agency and resistance complicates any simple account of AI systems as all-powerful shapers of identity. Consumers bring their own knowledge, values, and interpretive frameworks to interactions with AI-generated texts, and they use these resources to evaluate, accept, or resist the positions offered. The outcome of any interaction is not determined solely by the design of the AI system but emerges from the encounter between the system and the consumer.

Yet consumer agencies are exercised within constraints. The information available to consumers is shaped by what brands choose to disclose. The interpretive frameworks consumers bring are shaped by prior experiences with marketing communications, including experiences of deception and disappointment. And the interactive possibilities of chatbots are bound by the design choices of their creators, which determine what questions can be answered and what information can be provided. Understanding consumer response to AI-mediated sustainability communication requires attention to both the constructive power of AI systems and the interpretive agency of consumers. The outcome is not a simple imposition of identity but an ongoing negotiation in which both parties participate, albeit with different resources and constraints. This understanding aligns with the identity construction perspective elaborated by Authors (2025), which emphasizes the interactive, co-constructed nature of identity in consumer contexts.

VI. Limitations

This study has several limitations that should be considered when interpreting its findings. First, the corpus was limited to English-language texts from brands operating primarily in Western markets. The linguistic strategies analyzed may not generalise to other linguistic and cultural contexts, where different address forms, evaluative language, and identity constructions may be prevalent. As Zhou and Jiang (2025) note in their discussion of cross-cultural variation in green marketing response, cultural context significantly shapes how consumers interpret environmental claims. Future research should extend this analysis to non-English corpora and to brands operating in diverse cultural settings.

Second, the study focused on texts generated by AI systems but did not have direct access to the algorithms and training data that produced these texts. Analysis was based on the output of these systems rather than on their internal operations. While this focus is appropriate for examining consumer-facing communication, it limits understanding of how these outputs are generated and why particular linguistic choices are made. Research that combines discourse analysis with computational analysis of AI systems, as recommended by Lind (2025), could provide deeper insight into these questions.

Third, the study examined texts at a single point in time, providing a snapshot of AI-mediated communication rather than tracking its evolution. As AI technologies continue to develop rapidly, the linguistic strategies observed may change in ways that this study cannot capture. Longitudinal research tracking changes in AI-generated communication over time, as suggested by Wanick et al. (2025), would be valuable for understanding how these strategies evolve.



Fourth, the analysis focused on the texts themselves rather than on consumer interpretations of those texts. While the study inferred likely interpretive effects based on linguistic analysis and drew on evidence of consumer responses in chatbot interactions, it did not systematically investigate how consumers understand and respond to AI-generated sustainability communication. Research employing interviews, focus groups, or experimental methods, as called for by Qadri et al. (2026), could complement the discourse analytic approach by providing direct evidence of consumer interpretation.

Fifth, the study examined AI-generated communication in isolation from the broader media environments in which consumers encounter it. In practice, consumers encounter brand communications through multiple channels and in the context of diverse other information sources. Understanding how AI-generated texts interact with other forms of communication and with consumers' broader information environments is an important direction for future research identified by the authors (2025).

Despite these limitations, the study makes important contributions by bringing sociolinguistic and identity construction frameworks to bear on AI-mediated sustainable retail communication and by identifying patterns of identity construction, discursive dissonance, and ideological framing that have been underexamined in existing research.

VII. Conclusion

This study sets out to investigate how AI-mediated communication in sustainable retail environments constructs the eco-conscious consumer. Through qualitative discourse-pragmatic analysis of personalised emails, dynamic website content, and chatbot interactions, it has identified systematic patterns in how these texts position consumers and shape the possibilities for ethical consumption.

The findings reveal that AI-generated texts do not simply describe pre-existing consumer identities but actively construct them through address forms, evaluative language, presupposition, and interactive positioning. The eco-conscious consumer who emerges from these texts is defined by individual consumption choices, guided by values treated as stable and coherent, and addressed through personalised appeals that adapt to revealed preferences. This construction reflects and reproduces neoliberal conceptions of environmental responsibility that locate ethical agency in purchasing decisions while rendering structural dimensions invisible.

A central finding is the ethical voice paradox: the systematic dissonance between the warm, value-laden languages of AI-generated marketing communications and the technical, operational language of sustainability reporting. This dissonance creates potential for consumer skepticism and may undermine trust when consumers encounter gaps between front-stage ethics and back-stage operations. The paradox reflects fundamental tensions in sustainable retail that are intensified by AI integration.

Yet consumers are not passive recipients of AI-generated identity constructions. Evidence from chatbot interactions reveals active negotiation, selective acceptance, and resistance through persistent information seeking. Consumer agency is exercised within constraints shaped by disclosure practices, prior experiences, and system design, but it remains a significant factor in determining outcomes.

The study contributes to theoretical understanding by extending sociolinguistic and identity construction frameworks to AI-mediated communication, demonstrating their continued relevance for analysing technologically mediated discourse. It contributes methodologically by developing approaches for discourse pragmatic analysis of AI-generated texts that attend to both linguistic form and interactional function. And it contributes practically by identifying patterns and tensions that have implications for retailers, consumers, and policymakers.



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