



RESEARCH ARTICLE

Eco-Critical Discourse Analysis: Introducing Tanz Model for Identifying Greenwashing Tactics

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ABSTRACT

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Greenwashing, the practice of misrepresenting environmental efforts, poses a critical challenge in eco-advertising, often blurring the line between authentic sustainability and strategic deception. This study introduces the Tanz Model of Eco-Critical Discourse (TMED), a multi-dimensional framework designed to analyze green marketing practices through the integration of semiotic, linguistic, eco-critical, and compliance-based perspectives. TMED operates across three phases: (1) semiotic and linguistic analysis to decode visual and verbal cues in advertisements, (2) eco-critical appraisal to assess the authenticity of environmental claims and classify them into compliance, ambivalent, or defiance categories, and (3) social impact assessment to examine consumer engagement, market positioning, and societal influence of green claims. Data were collected purposively from product packaging, advertising materials, regulatory frameworks, and scholarly literature to support model construction and application. The framework was refined through expert feedback and pilot testing to ensure validity and practical relevance. TMED offers a comprehensive tool for evaluating the credibility of environmental claims, bridging theoretical insights with practical applications in academia, marketing, and policy-making, and contributes to advancing transparency, accountability, and ethical practices in environmental communication.

1. INTRODUCTION

Greenwashing has emerged as a pervasive challenge in contemporary marketing, particularly within eco-advertising. The term greenwashing was first coined by Jay Westerveld (1986) to describe the practice of misleading consumers about the environmental benefits of a product, service, or company. In simple terms, it refers to the use of exaggerated, ambiguous, or deceptive claims that portray a brand as more environmentally responsible than it actually is (Delmas & Burbano, 2011). Such practices not only distort consumer understanding but also undermine trust, thereby weakening genuine sustainability initiatives.

The increasing visibility of environmental issues has prompted advertisers to exploit *green* narratives as persuasive strategies. Products frequently display terms such as eco-friendly, natural, or pure, alongside imagery of leaves, water, or the color green, to construct an impression of environmental responsibility (Carlson, Grove, & Kangun, 1993). However, these claims often remain unverified, creating a blurred line between authentic sustainability and strategic deception. Scholars argue that this ambiguity complicates consumer decision-making and dilutes the effectiveness of truly sustainable practices (Torelli, Monga, & Kaikati, 2012).

Existing academic approaches to eco-advertising typically emphasize one dimension of analysis—either linguistic discourse (examining how words frame environmental identity), semiotics (studying how colors, shapes, and symbols imply green values), or factual compliance (comparing

claims with certifications and standards). While each of these perspectives contributes important insights, their isolation creates a fragmented understanding of how greenwashing operates. Furthermore, less attention has been given to the societal implications of greenwashing, particularly in terms of how it influences public perceptions of trust, ethics, and sustainability.

To address these gaps, the present study introduces a holistic framework that integrates four analytical domains: linguistic analysis, semiotic analysis, eco-critical appraisal, and social impact assessment. This multi-dimensional approach makes it possible to (1) uncover linguistic and visual techniques that construct questionable eco-narratives, (2) systematically verify claims through classification into compliance, ambivalence, or defiance, and (3) evaluate broader social implications in shaping consumer trust and regulatory discourse. By bringing these dimensions together, the framework offers not only an academic contribution to eco-critical discourse analysis but also practical value for policymakers, regulators, and advertisers seeking to strengthen transparency in environmental communication.

1.1 Problem Statement

Greenwashing in eco-advertising has become a critical concern, as many products present overstated or ambiguous environmental claims that confuse consumers and weaken trust. Existing approaches often study language, visuals, or compliance separately, which leads to a fragmented understanding of how green claims operate. At the same time, limited attention is given to verifying the authenticity of these claims or to considering their broader social impact. This gap highlights the need for a more comprehensive approach that can examine environmental claims in a holistic and transparent way.

1.2 Purpose of the Study

The purpose of this study is to explore how linguistic, visual, factual, and social dimensions contribute to the construction of environmental claims in eco-advertising. It seeks to provide a holistic framework for examining the authenticity, classification, and ethical implications of such claims in order to address gaps left by existing approaches. In doing so, the study develops an integrated model that combines linguistic analysis, semiotic interpretation, factual verification, and social perception evaluation. It also aims to establish a systematic method for classifying environmental claims into compliance (eco-friendly), ambivalence, or defiance (greenwashing), while further considering how public perceptions and societal impact shape their ethical and regulatory assessment.

1.3 Research Questions

Building on the research objectives, this study seeks to investigate how visual and linguistic elements construct green marketing narratives, establish a framework for evaluating environmental claims, and assess their societal impact. To achieve these aims, the following research questions have been formulated:

1. What linguistic and visual techniques are engaged in eco-advertising that may lead to hyperbolic or possibly questionable environmental claims?
2. What parameters may be established to evaluate authenticity of environmental claims?
 - a) How far can environmental claims be systematically verified for their authenticity?
 - b) How far can environmental claims be categorized into compliance, ambivalence, or defiance?
3. How far do public perceptions and societal impact contribute in influencing the ethical evaluation of environmental claims in eco-advertising?

1.4 Limitations

While the framework provides a comprehensive approach to analyzing greenwashing, certain limitations must be acknowledged. First, semiotic interpretation may involve a degree of subjectivity, as the meanings of visual and linguistic elements can vary across researchers and contexts. Second, restricted or partial access to detailed ingredient lists and compliance documentation constrains the ability to fully verify green claims. Third, although the framework highlights discursive and semiotic patterns, it does not fully address the psychological dimensions that shape consumer attitudes and decision-making. Furthermore, conducting multi-phase analyses on an extensive dataset requires considerable expertise and extended effort, which may limit replicability in resource-constrained settings. Finally, the framework's applicability may vary across cultural and regional markets,

necessitating contextual adaptation to ensure relevance. These limitations suggest the need for ongoing refinements to strengthen reliability, replicability, and broader applicability of the framework.

1.5 Significance and Scope of the Study

This study holds significance as it addresses the pressing issue of greenwashing, a practice that obscures the boundary between authentic sustainability efforts and deceptive marketing. By developing a comprehensive framework that combines linguistic, semiotic, and claim-verification dimensions, the research not only enhances academic inquiry into eco-discourse but also offers practical value for policymakers, regulators, and advertisers seeking to foster greater transparency in environmental communication.

The scope of the framework extends beyond the dataset examined in this study. Although informed by an analysis of fast-moving consumer goods, its design ensures adaptability across industries and cultural contexts, making it applicable on a global scale. The integrated approach allows for flexible deployment in diverse markets, enabling scholars and practitioners worldwide to uncover misleading environmental claims, strengthen consumer awareness, and encourage ethical advertising practices. In doing so, the study provides a valuable contribution that bridges theoretical discourse with real-world application.

1.6 Conceptual Framework

The conceptual framework of Eco-Critical Discourse is based on four core analytical domains:

- Linguistic Analysis – Investigates the use of green words, phrases, and rhetorical strategies that construct an eco-friendly image.
- Semiotic Analysis – Examines visual signs, colors, shapes, and other design elements that reinforce or symbolize environmental claims.
- Eco-Critical Appraisal – Evaluates the alignment between stated claims and actual product practices, categorizing them as compliance, ambivalence, or defiance (potential greenwashing).
- Social Impact Assessment – Considers how such claims are perceived in broader social and cultural contexts, and their influence on consumer trust and behavior.

This multi-dimensional approach provides a comprehensive understanding of greenwashing by connecting language, imagery, factual accuracy, and societal implications.

2. LITERATURE REVIEW

Greenwashing, the practice of misrepresenting a company's environmental efforts, has been widespread since the 1970s (Lyon & Montgomery, 2015). It includes misleading claims, from vague statements to outright falsehoods, making it difficult for stakeholders to differentiate genuine sustainability efforts (Naderer et al., 2017; Torelli et al., 2019). Companies often use greenwashing to attract eco-conscious consumers by exaggerating product sustainability, which can negatively impact stakeholder trust and corporate accountability (Soman, 2023; Torelli et al., 2019). Further research is needed to understand its mechanisms and societal impacts (Lyon & Montgomery, 2015).

Effective environmental communication is essential as consumers increasingly value sustainability (Bruno, 2024). Transparent and verifiable disclosures can build trust while greenwashing risks damaging corporate credibility (Keilmann & Koch, 2023). Combining regulatory measures with voluntary standards is recommended to enhance accountability (Jaiswal, 2024). Clear communication is critical for maintaining stakeholder confidence and corporate reputation (Kidaye & Saoussany, 2020).

Recent studies provide tools to address greenwashing. Spaniol et al. (2024) identified six key attributes of deceptive claims, while Huang et al. (2024) proposed a framework examining motivations and impacts. Nemes et al. (2022) developed an integrated framework to evaluate net-zero commitments. Seele and Gatti (2017) emphasized the co-construction of greenwashing through external accusations. These insights contribute to mitigating greenwashing in various contexts.

Eco-critical frameworks in green marketing aim to promote sustainability by integrating various approaches. Green marketing focuses on developing environmentally friendly products and

embedding sustainability in business practices (Gordon et al., 2011; Choudhury & Lakshmi, 2023). Social marketing encourages sustainable behaviors among stakeholders, while critical marketing applies critical theory to analyze marketing practices and challenge dominant norms (Gordon et al., 2011; Choudhury & Lakshmi, 2023). Together, these approaches support sustainable marketing (Gordon et al., 2011).

Green marketing research is categorized into themes like eco-orientation, green marketing strategy, green marketing functions, and the consequences of green marketing (Kumar, 2016). Frameworks have been developed to evaluate consumer environmental responsibility and understanding of eco-labels (Taufique et al., 2014).

Recent eco-critical discourse studies focus on understanding human-nature relationships. Ecolinguistics critiques texts promoting ecologically harmful practices (Stibbe, 2014). The term "ecosocial flourishing" replaces "sustainable," emphasizing the interdependence of social and ecological systems (Crowley, 2010). Ecological Discourse Analysis (EDA) integrates linguistics and ecology to examine diverse genres but faces challenges in addressing ecological concerns due to the lack of a systematic approach (Chu et al., 2024). Discursive ethics, rooted in critical theory, helps shape environmental policies and respond to uncertainty (O'Hara, 1996).

Ecolinguistics and critical discourse analysis have expanded to critique harmful environmental practices and promote a nurturing relationship with nature (Stibbe, 2014). These studies challenge consumerism and human supremacy over nature (Stibbe, 2015). In electroacoustic composition, ecological models have been explored within a semiotic context (Basanta, 2010). Addressing socio-ecological problems requires frameworks like Institutional Analysis and Development (IAD) and Social-Ecological Systems (SES), which encourage interdisciplinary dialogue (Ostrom & Cox, 2010).

Several studies emphasize the need for a comprehensive greenwashing assessment framework that integrates semiotics, linguistics, and compliance data (Nemes et al., 2022; Wagner, 2015). Nemes et al. (2022) suggest a label information search framework considering personal factors, while Wagner (2015) explores how symbols and design in food packaging can be used for greenwashing. The proposed model addresses these gaps by integrating semiotic analysis, eco-critical appraisal, and social impact assessment. The multi-phase approach decodes signs and symbols (Phase 1), assesses green claims (Phase 2), and evaluates social impact through consumer engagement (Phase 3). This model offers a more comprehensive framework for understanding and addressing greenwashing.

Semiotic analysis plays a significant role in understanding advertising, particularly through Barthes' theory, which focuses on linguistic, connoted, and denoted messages in advertisements (Vetrova, 2021). This method has been applied to analyze A-Mild cigarette ads (Ala, 2011) and SKIN1004 skincare products (Satriana & Ariyaningsih, 2024), revealing myths and deeper meanings in advertising. Over time, semiotic studies have evolved to include narratological analysis and emotional elements in advertisements (Bianchi, 2011). However, Barthes' theory has limitations, such as neglecting the audience's perspective, which could be addressed through cognitive approaches (Vetrova, 2021).

In green advertising, semiotics helps decode how visual and linguistic elements influence consumer perceptions of sustainability. Saussure's structuralist framework explores how signs in ads create meaning and shape consumer attitudes (Dewanti, 2023). However, while visual appeal strengthens brand associations, it may overshadow an objective evaluation of environmental claims (Kostan & Salendu, 2020). Despite this, exposure to sustainable advertising positively impacts consumer attitudes and encourages sustainable purchases (Eyada, 2024).

In environmental discourse, semiotics explores human-environment interactions by identifying communication disconnections and promoting dissent to address ecological challenges (Low, 2008). Environmental semiotics examines linguistic tensions in communities and integrates with Earth system science to provide new perspectives on ecological issues (Frich & Espejel, 2006; Olteanu et al., 2019). In urban contexts, semiotic analysis highlights how "green" materials shape environmental values and socio-economic priorities in sustainability initiatives (Kosatica, 2023).

Eco-friendly marketing relies on strategies like eco-labels, environmental advertising, and eco-brands to influence consumer behavior (Mallick et al., 2024). Eco-labels serve as indicators of sustainability, while authenticity and corporate social responsibility shape consumer choices

(Mallick et al., 2024). Millennials are particularly influenced by reputation, labeling, and packaging (Smith & Brower, 2012). Common green marketing terms, including sustainable and eco-friendly, aim to attract environmentally conscious consumers (Bhardwaj et al., 2023). Transparent practices and emotional appeal are crucial for effective eco-marketing, as they foster trust and encourage sustainable behavior (Shingrup, 2013; Mallick et al., 2024).

Recent studies on linguistic strategies in eco-friendly advertising highlight the complex methods used to promote sustainable products. Advertisers utilize various language features, such as positive adjectives, inclusive pronouns, and terminology with a scientific tone, to craft compelling messages (Hartono et al., 2022). Eco-friendly advertisements can be categorized into three distinct sub-genres: green commercial, greenwashed commercial, and green nonprofit or social advertising, each exhibiting unique linguistic and semiotic characteristics (Fill & Penz, 2017). Key persuasive strategies in advertising include capturing consumer attention, constructing a favorable brand image, providing evaluations, and fostering a sense of intimacy (Karpova, 2019). Additionally, the inclusion of environmental claims in advertising has seen both quantitative and qualitative growth, with cluster analysis revealing four specific green communication approaches (Testa et al., 2011). These insights underscore the increasing relevance of eco-advertising and the advanced linguistic tools employed to engage environmentally aware audiences.

Research on ingredient compliance and verification in eco-advertising underscores the difficulties in ensuring the accuracy of environmental claims. Companies often face incentives to market products as eco-friendly without fully adopting sustainable practices, highlighting the need for third-party monitoring to achieve genuine environmental benefits (Amato et al., 2015). The growth of green consumerism has resulted in an increase in environmental advertisements, but it has also contributed to consumer uncertainty regarding the validity of such claims (Fliegelman, 2011). Studies involving chemical analysis have identified cases of incomplete or inaccurate ingredient disclosures in product safety documentation, which can pose risks, such as workplace injuries (Welsh et al., 2000). To mitigate these challenges, certification mechanisms such as eco-labeling programs and third-party verifications from NGOs or private certifiers have been proposed. These strategies can reduce the necessity for public regulatory intervention and can be reinforced by green advertising to promote certified labels (Bottega & De Freitas, 2009). Overall, the research highlights the critical need for verifiable environmental claims and accessible external certifications to foster consumer trust and ensure product safety.

Current research has examined the intricate connections between social media, greenwashing, and how consumers perceive sustainable products. The influence of social media on green initiatives can substantially affect purchasing decisions, with the perception of green authenticity acting as a mediator (Fang, 2024). On the other hand, greenwashing practices may also positively influence consumer perceptions, highlighting the importance of being cautious when interpreting environmental claims (Ganesh & Sudhamaheswari, 2024; Mansoor et al., 2025). Furthermore, transparency on social media and the credibility of influencers have been shown to impact consumers' intentions to purchase sustainable products, emphasizing the power of these platforms in shaping consumer behavior (Sipos, 2024). The concept of "voting with a wallet" underscores the significant role of consumers in determining a business's success through their purchasing choices, particularly when responding to greenwashing tactics (Uthira & Nisha, 2024). These studies emphasize the need for genuine sustainability communication and the potential for social media to both enhance and challenge greenwashing practices in the market. Despite these contributions, there is still no comprehensive framework that simultaneously addresses semiotic, linguistic, compliance, and social dimensions of greenwashing. This research proposes TMED to fill this critical gap.

3. METHODOLOGY

The methodology of this study is designed around the development of the Tanz Model of Eco-Critical Discourse (TMED). Unlike conventional research that applies pre-existing frameworks, the present study focuses on constructing a new analytical model through the integration of semiotic, linguistic, eco-critical, and compliance-based perspectives. Thus, the model development process itself constitutes the methodological procedure.

3.1 Research Design

This study adopts a qualitative, exploratory, and integrative research design. The primary aim is to develop and apply the Tanz Model of Eco-Critical Discourse (TMED) for analyzing greenwashing strategies in eco-advertisements. Instead of relying on numerical frequency counts or statistical measurements, the methodology emphasizes conceptual synthesis, critical discourse analysis, and interpretive semiotics to uncover the underlying mechanisms of deceptive green claims.

3.2 Data Collection Methods

The data collection process for this research was designed to support the development of the Tanz Model of Eco-Critical Discourse, integrating insights from multiple disciplines to create a comprehensive framework for analyzing greenwashing. A multi-method approach was adopted, incorporating semiotic, linguistic, eco-critical, and compliance-based analyses to ensure a well-rounded evaluation of environmental claims.

3.2.1 Sampling Criteria. The data collection process for this research was designed to integrate theoretical and practical insights from multiple disciplines. The following sources were utilized to gather relevant data for this study:

3.2.1.1 Data Sources. The data collection process for developing the Tanz Model of Eco-Critical Discourse was structured around four key sources: semiotic, linguistic, eco-critical, and compliance-based analyses. These sources provided a comprehensive foundation for understanding how green marketing constructs eco-friendly narratives and how misleading claims can be identified.

The visual data collection focused on semiotic analysis, utilizing books and research articles on semiotics along with real-world product packaging and advertisements. This phase aimed to identify and analyze signs, symbols, colors, fonts, and imagery used in green marketing. By applying semiotic theories, the study examined how these visual elements contribute to eco-friendly narratives and uncovered patterns and strategies commonly employed in greenwashing.

For linguistic data collection, discourse analysis methods were employed, drawing from books and models in pragmatics, critical linguistics, and discourse analysis, alongside green-marketed product descriptions. This phase explored how language choices, metaphors, and vague terms influence consumer perception. Critical Discourse Analysis (CDA) was applied to examine misleading language tactics, assessing the role of persuasive and ambiguous language in shaping green narratives.

The eco-critical data collection was grounded in research on eco-criticism and environmental discourse, providing context for the study within broader sustainability discussions. This phase investigated how environmental claims not only shape consumer beliefs but also reinforce consumerism while influencing ecological ethics. Additionally, eco-critical theories were applied to identify the ideological underpinnings of greenwashing and its broader implications.

Finally, compliance data collection focused on regulatory standards and greenwashing frameworks, including the Seven Sins of Greenwashing and environmental labeling studies. This phase aimed to establish clear criteria for evaluating environmental claims, ensuring a structured assessment of green marketing practices. Product claims were analyzed in relation to industry standards and sustainability regulations, leading to the development of classification criteria for differentiating compliance, ambiguous claims, and greenwashing.

By synthesizing insights from these four key data sources, this research constructs the Tanz Model, offering a systematic and holistic approach to analyzing greenwashing. The integration of semiotic, linguistic, eco-critical, and compliance-based perspectives ensures that the model provides both a theoretical and practical framework for evaluating environmental claims in marketing and product communication.

3.2.2 Sampling Method. The sampling method employed in this study is purposive sampling, which was selected to ensure the inclusion of data sources that are most relevant to the objectives of this research. Purposive sampling allows for the intentional selection of materials based on their theoretical and practical relevance to the study's focus on semiotics, linguistics, greenwashing, and eco-criticism.

This sampling approach was essential for creating a new model that integrates semiotic, linguistic, and eco-critical analyses with greenwashing frameworks. By selecting sources purposively, the study ensured the inclusion of only those materials that directly contributed to the theoretical foundation and practical application of the proposed model.

4. Analytical Framework

Analyzing green marketing requires a multidimensional approach that considers both visual and linguistic elements, as well as their broader environmental and social implications. Many companies use eco-friendly imagery and language to appeal to environmentally conscious consumers, but not all claims are genuine. To distinguish between authentic sustainability efforts and deceptive greenwashing practices, a structured analytical framework is necessary.

4.1 Tanz Model of Eco-Critical Discourse

In order to examine the authenticity and impact of environmental claims in eco-advertising, this study gradually developed a multi-phased analytical model rather than presenting it as a complete structure at the outset. The construction of the model followed a step-by-step process, beginning with an exploration of how such claims are linguistically and visually constructed, then moving towards their critical appraisal in light of factual verification, and finally assessing their broader social implications. Each phase was informed by established theoretical perspectives and previous research, which ensured both methodological grounding and analytical clarity. This incremental approach allowed the framework to evolve logically, with each stage building upon the insights of the previous one.

4.1 Phase 1: Semiotics of Green Language

In developing the analytical framework, the first step was to examine how environmental claims are initially constructed through signs and language. This led to the formulation of the semiotics of green language, which highlights the role of both visual and linguistic dimensions in shaping the perception of eco-advertising. Existing scholarship supports this focus, as Barthes (1977) emphasized that signs operate at denotative and connotative levels, while Kress and van Leeuwen (2006) demonstrated how visual grammar—colors, shapes, and layouts—creates socially shared meanings. Similarly, discourse analysts such as Fairclough (1995) and Goatly (2002) have shown that metaphors, idioms, and lexical choices embed ideological positions in seemingly neutral language.

Accordingly, the visual domain of this phase focuses on images, signs, colors, and fonts that symbolically associate products with nature, while the linguistic domain emphasizes green words, metaphors, and idioms that construct eco-friendly identities. By combining these semiotic resources, advertisers strategically position products as natural and sustainable, often regardless of factual accuracy. This phase thus establishes the semiotic foundation of the model, upon which further critical evaluation was developed in the next stage.

The inclusion of these multimodal resources within the first phase of the model is grounded in established research traditions. Signs and symbols have long been recognized as key vehicles of meaning-making, with Barthes (1977) stressing that visual signs often carry cultural connotations that extend beyond literal denotation. The emphasis on color is justified through studies such as Aslam (2006), who demonstrated that green tones in marketing evoke associations of health, freshness, and environmental responsibility. Similarly, shapes and layouts are not neutral design features but, as Kress and van Leeuwen (2006) argue, function as elements of “visual grammar” that guide perception and create social meanings. Typography and fonts also contribute to semiotic positioning, with van Leeuwen (2005) showing how style and texture of lettering index authority, naturalness, or playfulness in branding. On the linguistic side, the use of metaphors and idioms is supported by Goatly (2002), who illustrated how ecological discourse embeds ideological meanings through figurative language, while Chen (2016) emphasized that “green words” such as pure, natural, and organic serve as lexical markers of eco-identity. Together, these strands of scholarship validate the necessity of including visual and linguistic dimensions—signs, colors, shapes, fonts, and lexical strategies—within this phase of the model. The structure of this first phase is illustrated below:

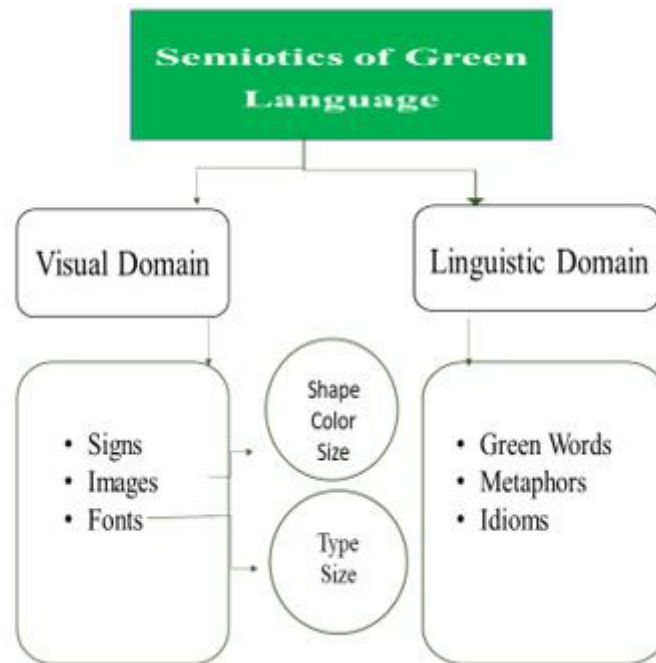


Figure 4.1. Semiotics of Green Language

Note. This phase examines how environmental claims are constructed through visual semiotic cues (e.g., color, shape, imagery) and linguistic resources (e.g., green words, metaphors, idioms)

4.2 Phase 2: Eco-Critical Appraisal

Building on the semiotic foundation, the second phase of the model was developed to critically evaluate the authenticity of environmental claims. While the first phase revealed how meanings are constructed through visual and linguistic resources, it was equally necessary to establish a mechanism for distinguishing between genuine claims and misleading ones. This led to the formulation of the eco-critical appraisal phase, which emphasizes factual verification and systematic classification of claims.

In this phase, environmental claims are assessed against ingredient lists, certifications, or recognized eco-standards in order to determine their credibility. Based on this evaluation, claims are categorized into three distinct groups:

- Compliance (Eco-friendly); Claims that are factually supported and aligned with established environmental criteria.
- Ambivalence; Claims that are vague, exaggerated, or partially substantiated, often creating uncertainty in interpretation.
- Defiance (Greenwashing); Claims that are misleading, deceptive, or directly contradicted by the product's composition or practices.

The need for such classification has been emphasized in several earlier studies. TerraChoice (2009), for instance, identified the “Seven Sins of Greenwashing” as a framework for detecting misleading eco-claims, while Carlson et al. (1993) offered one of the earliest typologies for environmental advertising claims. Lyon and Montgomery (2015) also highlight that systematic appraisal is essential to uncover the discrepancy between marketing discourse and actual environmental performance. Drawing on these insights, this phase of the model operationalizes the process of testing claims against verifiable evidence.

By integrating semiotic construction (Phase 1) with factual verification and categorization (Phase 2), the model establishes a bridge between representation and authenticity. This prepares the ground for the final phase, which explores how these classified claims influence public trust and societal perceptions. The structure of this second phase is illustrated below:



Figure 4.2. Eco-Critical Phase

Note. This phase focuses on verifying environmental claims against factual evidence such as product ingredients or certifications. Based on this appraisal, claims are systematically categorized as compliant (eco-friendly), ambivalent, or defiant (greenwashing).

4.3 Phase 3: Social Impact Evaluation

The third and final phase of the model was developed in response to a significant gap in existing research. While the first phase demonstrated how environmental claims are linguistically and visually constructed, and the second phase established a method for their factual verification and classification, there remained the critical question of how such claims influence public perceptions, consumer trust, and broader societal values. Existing frameworks have not adequately addressed this dimension. For example, semiotic and multimodal approaches (Barthes, 1977; Kress & van Leeuwen, 2006; Machin & Mayr, 2012; Jamet al., 2025) have explained how meanings are constructed through images and texts but do not extend their analysis to societal consequences. Similarly, Eco-Critical Discourse Analysis (Stibbe, 2015) critiques the stories we live by but stops short of examining the regulatory or ethical implications of green advertising.

Frameworks on greenwashing have attempted to classify claims through verification methods. For instance, Carlson, Grove, and Kangun (1993) proposed a matrix of environmental claims, TerraChoice (2009) identified the “Seven Sins of Greenwashing,” and Lyon and Montgomery (2015) analyzed deceptive strategies in corporate green communication. Yet, these approaches also focus narrowly on classification and do not assess the social acceptability or ethical impact of such claims.

At the same time, research in consumer studies has highlighted the importance of this missing dimension. Banerjee, Gulas, and Iyer (1995) showed that misleading environmental messages erode credibility, while Alniacik et al. (2011) and Nyilasy, Gangadharbatla, and Paladino (2014) demonstrated that greenwashing fosters skepticism and distrust among consumers. Delmas and Burbano (2011) further emphasized that deceptive environmental claims require regulatory attention due to their wider societal consequences. These studies collectively point to the necessity of extending analysis beyond semiotic and factual domains to include social impact evaluation.

To address this gap, the third phase of the model — Social Impact Evaluation — was introduced. In this phase, environmental claims are assessed for their acceptability in terms of consumer trust, ethical implications, and alignment with societal sustainability goals. This inclusion not only integrates insights from semiotic and eco-critical traditions with factual verification but also advances the field by explicitly accounting for the societal and ideological outcomes of green advertising. This is the novel contribution of the Tanz Model of Eco-Critical Discourse (TMED), as no existing framework brings together all three dimensions — semiotic construction, eco-critical appraisal, and social impact evaluation — into a single integrated model. The structure of this third phase is illustrated below:

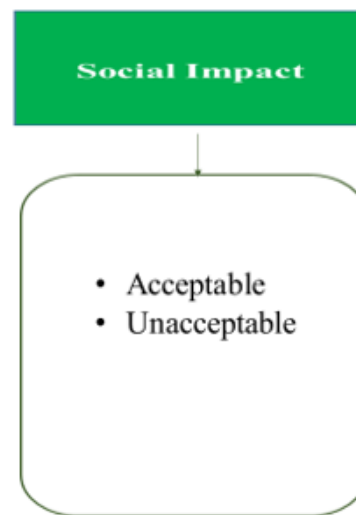


Figure 4.3. Social Impact

Note. This phase addresses the research gap by assessing how environmental claims influence consumer trust, ethical perceptions, and societal responses. It extends beyond semiotic, eco-critical, or greenwashing analyses by explicitly evaluating the social consequences of environmental advertising

After explaining each phase individually with theoretical support and previous research, the three components are now brought together in the form of a unified framework. This integrated model, named the Tanz Model of Eco-Critical Discourse (TMED), illustrates how linguistic and semiotic constructions, factual verification, and social impact evaluation collectively provide a comprehensive tool for analyzing environmental claims. The following figure presents the complete picture of the model, showing how the three phases interconnect to address gaps left by earlier approaches.

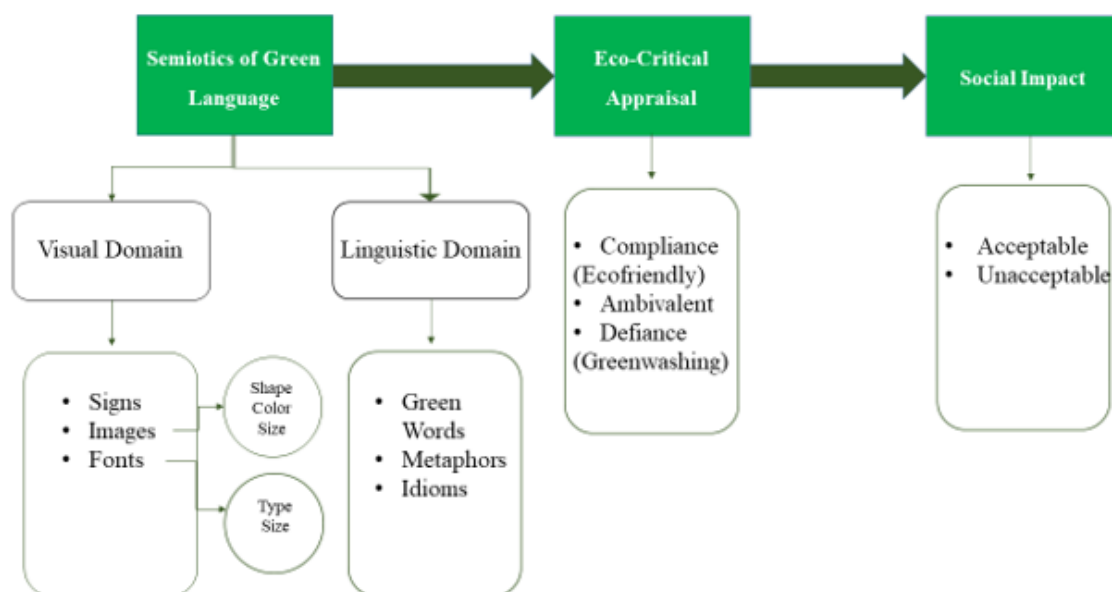


Figure 4.4. Tanz Model of Eco-Critical Discourse

Note. This figure presents the integrated framework developed in this study. The model brings together three distinct but interlinked phases: (1) the semiotic analysis of green language and imagery, (2) the verification and classification of environmental claims, and (3) the evaluation of their social and ideological impact. While previous approaches have addressed these aspects in isolation, TMED combines them into a holistic framework. This integration not only provides methodological transparency but also fills a critical research gap by offering a comprehensive tool for examining the authenticity, credibility, and societal consequences of environmental claims in eco-advertising.

This framework is not only theoretical but also adaptable for practical application. By moving from semiotic construction to empirical verification and then to societal evaluation, the model offers

researchers, regulators, and educators a structured approach for identifying and addressing greenwashing. Its adaptability across diverse product categories makes it a versatile tool that bridges academic inquiry with real-world consumer protection.

5. DISCUSSION

5.1 Linguistic and Visual Techniques in Eco-Advertising

The findings of this study demonstrate that eco-advertising employs a wide range of linguistic and visual strategies to construct persuasive environmental claims. Linguistically, terms such as *pure*, *100% natural*, *eco-friendly*, and *organic* were frequently identified, often without substantiating evidence. These lexical choices create a hyperbolic effect that amplifies the perceived *greenness* of products, aligning with Stibbe's (2015) argument that ecolinguistic narratives often rely on "stories we live by" rather than verifiable facts. Similarly, Goatly (2002) has highlighted how metaphorical and exaggerated language reinforces ecological credibility without ensuring authenticity.

Visually, the semiotic analysis revealed recurring use of green color palettes, natural imagery (leaves, water drops, mountains), and packaging shapes that connote sustainability. These findings resonate with Bortree (2012), who emphasizes that green aesthetics are deliberately designed to elicit positive associations with environmental responsibility. However, when analyzed in context, many of these semiotic elements were disconnected from the actual product composition, exposing a gap between representation and reality. This confirms earlier observations by Lyon and Montgomery (2015) that the visual rhetoric of sustainability is often strategically manipulated to exaggerate environmental benefits.

Overall, the linguistic and visual dimensions work together to create a strong but sometimes questionable ecological ethos. The study shows that these strategies are not inherently misleading but become problematic when unsupported by factual verification, thereby reinforcing greenwashing tendencies.

5.2 Parameters for Evaluating Authenticity of Environmental Claims

The second research question focused on the extent to which environmental claims can be systematically verified for authenticity. The findings indicate that evaluating such claims requires a systematic approach grounded in verifiable evidence. By triangulating information from product ingredient lists, third-party certifications, and international compliance standards, the study demonstrated that credibility can be measured beyond surface-level advertising language. In many instances, seemingly credible labels such as *100% pure* or *fully natural* were contradicted by the inclusion of chemical additives or non-sustainable components. This exposes how selective disclosure functions as a greenwashing tactic, where positive aspects are amplified while problematic elements are concealed. Such results align with Ottman's (2011) position that credibility in eco-advertising cannot be assumed but must be established through rigorous validation against recognized benchmarks.

The findings further established that environmental claims can be effectively organized into a threefold typology through the proposed model. Claims falling into compliance were those consistently aligned with verifiable eco-friendly standards, such as third-party certifications or transparent ingredient disclosure (Delmas & Burbano, 2011). Ambivalence captured situations where claims were partially accurate yet overstated, leaving space for consumer misinterpretation, a phenomenon frequently highlighted in studies of corporate communication (Lyon & Montgomery, 2015). The final category, defiance, denoted deliberate or direct contradictions between advertising claims and actual product composition, exemplifying greenwashing in its strongest form, understood here as the practice of misleading consumers about a company's environmental performance or the environmental benefits of a product (OECD, 2011; Delmas & Burbano, 2011). This categorization reflects one of the key contributions of the model: providing a structured diagnostic framework that existing eco-critical and multimodal approaches have not sufficiently addressed. In this way, the model directly answers the research focus by offering both scholars and regulators a systematic means to distinguish between authentic, ambiguous, and misleading environmental advertising practices.

5.3 Public Perceptions and Societal Impact in Ethical Evaluation

In the proposed model, the societal impact phase has been introduced precisely to address third question. Unlike earlier frameworks, this study suggests that the evaluation of eco-claims cannot stop at linguistic and factual verification alone. Even when greenwashing is identified through inconsistencies between claims and ingredients, it is equally important to examine whether such products remain socially acceptable and commercially successful.

For this reason, the third phase of the model incorporates the measurement of societal response. Multiple approaches can be employed depending on research or regulatory needs: consumer surveys and interviews may provide insight into awareness and perceptions; social media followership can reflect levels of online trust and engagement; departmental store visibility and placement (big racks) may reveal market acceptance; while sales performance and publicly available balance sheets can demonstrate the economic impact of consumer choices.

By including this dimension, the model highlights a critical gap in previous approaches, where greenwashing was often identified but not systematically linked to its real-world consequences. If products proven to employ greenwashing strategies are still widely accepted, it signals an urgent need for consumer education and stricter regulatory mechanisms. Thus, the societal impact phase transforms the framework from a purely analytical tool into a practical evaluative model that can inform academia, industry, and policy-making alike.

6. CONCLUSION

This study has proposed and refined a comprehensive framework that integrates linguistic analysis, semiotic interpretation, and factual verification to evaluate the authenticity of environmental claims in eco-advertising. The framework was piloted on a subset of advertisements to assess its effectiveness in identifying greenwashing, and expert feedback from marketers, sustainability researchers, and semioticians was incorporated to enhance its reliability and validity.

Beyond its theoretical contributions, the framework holds practical value across multiple domains. For academic research, it facilitates in-depth exploration of greenwashing strategies and eco-critical discourse in diverse contexts and industries. For marketing practice, it provides a systematic tool for companies to assess the credibility of their green claims and foster consumer trust. For policy-making, it offers insights that can inform regulatory mechanisms in environmental advertising, promoting greater transparency and accountability.

By bringing together semiotic, linguistic, and compliance-based evaluations, the study addresses significant gaps in existing approaches such as eco-critical discourse analysis and multimodal analysis. Ultimately, it contributes to advancing both scholarly understanding and practical mechanisms to counter misleading environmental communication, thereby encouraging more authentic and responsible forms of green advertising.

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