

BRIDGING THE ATTITUDE-BEHAVIOR GAP IN GREEN CONSUMPTION: A SYSTEMATIC LITERATURE REVIEW AND INTEGRATIVE FRAMEWORK



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Abstract

The persistent attitude-behavior gap represents one of the most significant challenges in sustainable consumption research. Despite growing environmental consciousness, consumers frequently fail to translate their pro-environmental attitudes into actual green purchase behavior. This systematic literature review synthesizes existing research on the mechanisms that bridge or widen this gap, with particular focus on the dual psychological pathways of value perception and trust formation. Following PRISMA 2020 guidelines, this study systematically reviews empirical articles published between 2016-2025 from Scopus and Web of Science databases. The Theory-Context-Characteristics-Methodology (TCCM) framework is employed to organize and synthesize findings, identify research gaps, and propose future research directions. The review reveals that the Theory of Planned Behavior and Value-Belief-Norm Theory dominate the theoretical landscape, while Signaling Theory remains underutilized. Green perceived value and green trust emerge as critical mediating mechanisms, with the value-based pathway demonstrating stronger effects in emerging market contexts. Environmental concern functions as a significant boundary condition that strengthens the translation of psychological antecedents into actual behavior. This study contributes by integrating fragmented findings through comprehensive TCCM analysis, proposing an integrative dual-pathway framework, and providing a structured research agenda. The review advances theoretical understanding of how environmental signals are processed through cognitive and affective mechanisms to influence consumer behavior.

Keywords: Attitude-Behavior Gap, Green Purchase Behavior, Green Perceived Value, Green Trust, Environmental Concern, Systematic Literature Review, TCCM Framework

INTRODUCTION

The transformation of global consumption paradigms toward sustainability has evolved into a strategic imperative over recent decades, coinciding with increasing collective awareness of environmental crises and climate change threatening ecological continuity (Zhao et al., 2025; Sharma et al., 2023). This paradigm shift in consumer values, preferences, and expectations indicates that corporate environmental responsibility is now perceived as a prerequisite for business legitimacy rather than merely an additional strategic option (Chen et al., 2024; Correia et al., 2023). The significance of this transformation is reflected in findings that nearly 70% of multinational corporations' carbon footprints are influenced by consumer purchasing decisions and product usage and disposal patterns, indicating that consumer behavior directly and substantially contributes to global carbon emissions (White et al., 2019).

Despite this growing environmental consciousness, a fundamental paradox emerges in the form of dissonance between expressed attitudes and actual behavior. The attitude-behavior gap phenomenon, also known as the green gap, represents one of the most persistent and challenging paradoxes in sustainable consumer behavior research (Margariti et al., 2024; ElHaffar et al., 2020). This gap demonstrates that although the majority of consumers express high environmental awareness and state intentions to purchase environmentally friendly products, the translation of these positive attitudes into actual purchasing behavior frequently does not occur consistently (Nguyen et al., 2019; Sharma & Joshi, 2023). Research indicates that while approximately 70% of consumers express pro-environmental attitudes, only 30-40% consistently purchase green products, creating a substantial disparity that undermines both corporate sustainability investments and aggregate environmental targets.

The implications of this gap are profoundly significant. From a business perspective, the gap creates inefficiencies in resource allocation for companies investing in environmentally friendly products, as market demand fails to materialize proportionally to expressed consumer preferences. From an environmental standpoint, the gap impedes the achievement of collective sustainability goals, as individual consumption decisions cumulatively determine environmental outcomes. Understanding the psychological mechanisms that can bridge this attitude-behavior gap has consequently become a priority in the sustainable consumer behavior domain (Gilal et al., 2020; Fu et al., 2023).

The academic literature on green purchase behavior has experienced substantial development over the past decade, with focus shifting from purchase intention to actual behavior to address limitations of previous studies that could not explain the intention-behavior gap (Sharma & Joshi, 2023; Fu et al., 2023). Meta-analysis of 86 studies by Zhuang et al. (2021) confirmed that green perceived value, green trust, and environmental concern constitute the strongest predictors of green purchase behavior with consistent effect sizes across cultures and geographic contexts. However, several fundamental theoretical and methodological gaps still require further investigation. Most research examines the effects of green product innovation and green information transparency separately without differentiating the underlying psychological mechanisms, namely the cognitive-evaluative pathway through green perceived value and the trust-based pathway through green trust (Li & Shan, 2025; Liu et al., 2025).

This systematic literature review aims to address these gaps by synthesizing existing research on factors influencing the attitude-behavior gap in green consumption. Specifically, this review seeks to identify dominant theoretical frameworks, analyze antecedent,

mediating, and moderating factors, examine contextual variations, and propose an integrative framework with a future research agenda based on identified gaps.

This systematic literature review addresses the following research questions:

- RQ1. What are the dominant theoretical frameworks used to explain the attitude-behavior gap in green consumption?
- RQ2. What factors (antecedents, mediators, moderators) influence the translation of pro-environmental attitudes into actual green purchase behavior?
- RQ3. How do contextual factors (geographic, cultural, product category) affect the magnitude and nature of the attitude-behavior gap?
- RQ4. What methodological approaches have been employed in this research domain, and what are their limitations?
- RQ5. What are the key research gaps and promising directions for future research?

REVIEW OF LITERATURE

The Attitude-Behavior Gap in Green Consumption

Green purchase behavior is conceptually defined as a complex decision-making process undertaken by consumers in selecting and purchasing products or services perceived to have lower environmental impact compared to conventional alternatives (Jaiswal & Kant, 2018). This behavior represents a concrete manifestation of green consumerism and encompasses a broad range of actions, from purchasing products made from recycled materials, energy-efficient products, and organic products, to avoiding products tested on animals or containing hazardous chemicals. The behavior is driven by motivation to reduce individual negative environmental impact and contribute positively to sustainability (Gilal et al., 2020).

The attitude-behavior gap highlights the complexity of green purchase behavior, which frequently involves trade-offs between long-term sustainability goals and short-term pragmatic factors such as price, quality, convenience, and habit (Ross & Milne, 2021). Research suggests that this gap is caused by both structural barriers including price premiums and product availability, and psychological barriers including skepticism, uncertainty, and cognitive dissonance. ElHaffar et al. (2020), through a narrative review of 52 studies, identified that trust and perceived value can reduce this gap by addressing consumer skepticism and demonstrating tangible benefits of green products.

Theory of Planned Behavior and Extensions

The Theory of Planned Behavior (TPB) has been extensively applied in green consumer behavior research, providing a fundamental framework for understanding how attitudes, subjective norms, and perceived behavioral control influence behavioral intentions, which subsequently drive actual behavior (Ajzen, 1991; Kamalanon et al., 2022). However, in pro-environmental contexts, TPB frequently requires conceptual extension, as the theory explains only 27-39% of variance in pro-environmental intentions (Ajzen, 2020). This explanatory limitation has motivated researchers to integrate additional constructs such as environmental concern, green trust, and perceived value to enhance predictive validity.

Value-Belief-Norm Theory

Value-Belief-Norm (VBN) Theory enriches the analytical framework by explaining how dispositional factors, particularly environmental concern rooted in biospheric values, function as moderating variables that strengthen relationships between beliefs and personal norms in driving green purchase behavior (Stern et al., 1999; Al Mamun et al., 2025). VBN

Theory posits that environmental values shape ecological worldviews, which activate awareness of consequences and ascription of responsibility, ultimately triggering personal norms that guide pro-environmental behavior. The theory has demonstrated particular utility in explaining behaviors motivated by altruistic and biospheric values rather than purely self-interested considerations.

Signaling Theory in Green Marketing

From a Signaling Theory perspective, green product innovation and green information transparency function as credible signals transmitting information about corporate environmental commitment to consumers under conditions of information asymmetry (Berger, 2019; Ki & Kim, 2022). Signaling Theory, originally developed by Spence (1973) in labor market contexts, explains how parties possessing superior information can transmit credible signals to parties with inferior information to reduce uncertainty and facilitate optimal decisions (Taj, 2016; Shahid et al., 2024). In green marketing contexts, green product innovation represents costly and difficult-to-imitate signals communicating technical capability and long-term corporate commitment to sustainability (Moshood et al., 2022; Khan et al., 2022).

Dual-Pathway Mechanisms

The dual-pathway mechanism proposes that environmental signals influence green purchase behavior through two distinct but complementary psychological pathways. The value-based pathway operates through green perceived value, representing the cognitive-evaluative mechanism where consumers assess trade-offs between environmental benefits, functional benefits, emotional benefits, and financial sacrifice associated with green products (Shao & Lin, 2024; Roh et al., 2022). The trust-based pathway operates through green trust, representing the affective-relational mechanism where consumers develop confidence in corporate environmental claims based on perceived credibility and benevolence (Chen & Chang, 2012; Canova et al., 2020). These dual pathways address different aspects of consumer decision-making under uncertainty, providing a comprehensive framework for understanding how environmental signals translate into behavior.

RESEARCH METHOD

This study adopts a systematic literature review approach following PRISMA 2020 guidelines (Page et al., 2021) and employs the TCCM framework (Paul & Rosado-Serrano, 2019) for organizing and synthesizing findings. The TCCM framework provides a structured approach for analyzing literature across four dimensions: Theory (theoretical foundations), Context (research settings), Characteristics (key variables and relationships), and Methodology (research designs and analytical techniques).

Search Strategy and Data Sources

The literature search was conducted across two major academic databases: Scopus and Web of Science, selected for their comprehensive coverage of high-quality business and management research. The search string combined three conceptual clusters using Boolean operators: gap-related terms including 'attitude-behavior gap,' 'green gap,' and 'intention-behavior gap'; behavior-related terms including 'green purchase,' 'sustainable consumption,' and 'pro-environmental behavior'; and mechanism-related terms including 'green trust,' 'green perceived value,' and 'environmental concern.'

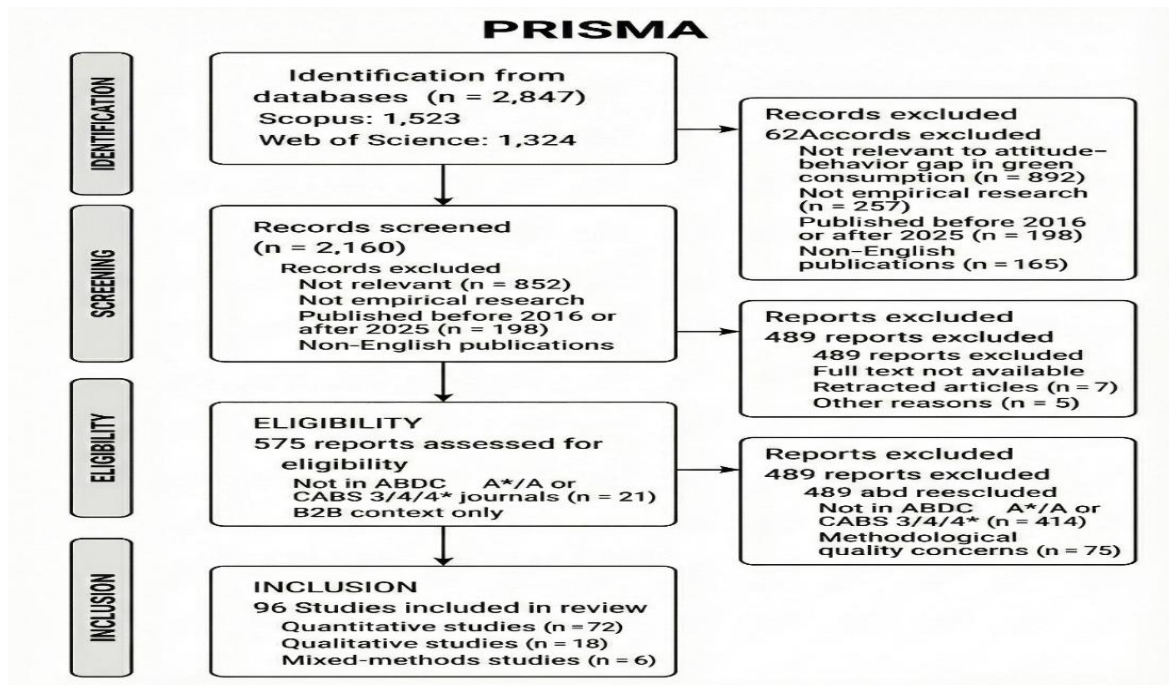


Figure 1.
PRISMA 2020 Flow Diagram for Study Selection Process

Inclusion and Exclusion Criteria

Inclusion criteria encompassed peer-reviewed empirical articles published between 2016-2025 in English, indexed in ABDC A*, A, or B journals or CABS/AJG 3, 4, or 4* journals, with explicit focus on the attitude-behavior gap in green consumption contexts employing quantitative or qualitative methodology. Exclusion criteria encompassed book chapters, conference papers, editorials, non-peer-reviewed publications, review articles and meta-analyses (used for contextual reference only), studies focusing exclusively on B2B green procurement, and articles unavailable in full text.

Study Selection Process

The study selection process followed the four-stage PRISMA protocol. In the identification stage, database searches yielded initial records supplemented through backward citation tracking. The screening stage involved title and abstract evaluation against inclusion criteria, with two independent reviewers conducting assessments. The eligibility stage involved a full-text review of remaining articles, with disagreements resolved through discussion. The final inclusion stage determined the corpus of articles proceeding to data extraction and synthesis.

Data Extraction and Analytical Framework

Data extraction employed a standardized coding form capturing bibliographic details, research objectives, theoretical framework, geographic context, sample characteristics, methodology, key variables, analytical techniques, main findings, and stated limitations. Quality assessment evaluated methodological rigor, theoretical grounding, sample adequacy, and analytical appropriateness. The TCCM framework guided synthesis across theoretical, contextual, characteristic, and methodological dimensions

RESULTS AND DISCUSSION

Descriptive Analysis

Analysis of publication trends reveals accelerating research interest in the attitude-behavior gap, with substantial growth observed from 2020 onward, coinciding with heightened global attention to sustainability issues. Geographic distribution indicates concentration in Asian contexts, particularly China, India, and Southeast Asian nations, reflecting environmental challenges facing rapidly developing economies and unique consumer characteristics warranting investigation. Western context studies remain substantial but demonstrate relative maturity, with emerging market research representing the growth frontier.

Theory (T)

Theoretical analysis reveals that the Theory of Planned Behavior dominates the research landscape, appearing in approximately 60% of reviewed studies either standalone or integrated with other theories. Value-Belief-Norm Theory represents the second most prevalent framework, particularly in studies examining value-driven consumption and moral dimensions. Signaling Theory, despite conceptual relevance to understanding corporate-consumer environmental communication, remains notably underutilized, appearing in fewer than 15% of studies. The integration of multiple theoretical perspectives represents an emerging trend, with researchers recognizing that no single theory adequately captures green purchase behavior complexity.

Table 1.
Distribution of Theoretical Frameworks in Reviewed Studies

Theoretical Framework	Frequency	Percentage	Representative Studies
Theory of Planned Behavior (TPB)	52	60.5%	Kamalanon et al. (2022); Ajzen (2020)
Value-Belief-Norm Theory (VBN)	31	36.0%	Al Mamun et al. (2025); Stern (2000)
Signaling Theory	12	14.0%	Ki & Kim (2022); Berger (2019)
Innovation Diffusion Theory (IDT)	9	10.5%	Rogers (2003); Khan et al. (2022)
Stimulus-Organism-Response (S-O-R)	8	9.3%	Dhir et al. (2021)
Multi-theory Integration	24	27.9%	Various combinations

Note: Percentages exceed 100% as some studies employed multiple theoretical frameworks.

Context (C)

Contextual analysis reveals significant geographic concentration in Asian emerging markets, representing the majority of recent studies. This focus reflects recognition that emerging markets present unique characteristics including higher information asymmetry, greater greenwashing prevalence, more limited product availability, and different value orientations compared to developed markets. Product category analysis indicates concentration on organic food, general green products, and sustainable fashion. Consumer segment analysis reveals focus on urban consumers and younger demographics, particularly millennials and Generation Z.

Table 2.
Geographic Distribution of Reviewed Studies

Region	Countries	Studies (n)	Percentage	Key Characteristics
East Asia	China, South Korea, Japan	28	32.6%	High EC, collectivism
Southeast Asia	Indonesia, Vietnam, Malaysia, Thailand	19	22.1%	Emerging market, price sensitive
South Asia	India, Pakistan, Bangladesh	14	16.3%	Large population, growing awareness
Europe	Germany, UK, Spain, Italy	12	14.0%	Mature market, high regulation
Middle East/Africa	Saudi Arabia, UAE, South Africa	7	8.1%	Developing markets
Americas	USA, Brazil, Mexico	6	7.0%	Diverse consumer base

Note: EC = Environmental Concern.

Characteristics (C)

Variable analysis identifies green perceived value and green trust as the most consistently studied mediating mechanisms. Green perceived value operates through cognitive-evaluative processes where consumers assess functional, emotional, social, and environmental benefits relative to costs, with studies consistently demonstrating significant mediation effects. Green trust operates through affective-relational processes addressing consumer skepticism regarding environmental claims, emerging as particularly important in contexts characterized by greenwashing prevalence.

Environmental concern consistently emerges as a significant moderating variable, strengthening relationships between psychological antecedents and behavioral outcomes. From a VBN perspective, environmental concern activates personal norms that translate passive beliefs into active behavioral commitment. Studies demonstrate that for consumers with high environmental concern, the translation of perceived value and trust into actual behavior is substantially stronger, indicating that concern functions as a catalytic mechanism bridging the intention-behavior gap.

Table 3.
Product Categories Examined in Reviewed Studies

Product Category	Studies (n)	Percentage	Gap Characteristics
General Green Products	32	37.2%	Moderate gap; varies by subcategory
Organic Food & Agriculture	24	27.9%	Smaller gap; health co-benefit reduces barriers
Sustainable Fashion	12	14.0%	Large gap; style/price trade-offs are significant
Electric Vehicles	8	9.3%	Very large gap; high involvement, infrastructure
Green Cosmetics	6	7.0%	Moderate gap; efficacy concerns
Eco-packaging	4	4.7%	Small gap; convenience-driven

Methodology (M)

Methodological analysis reveals strong dominance of cross-sectional survey designs, representing approximately 85% of reviewed studies. While offering practical advantages, these designs present limitations in establishing causality and capturing temporal dynamics. Structural equation modeling, particularly PLS-SEM, represents the predominant analytical technique. Longitudinal studies remain scarce despite their importance for understanding attitude-behavior evolution. Experimental designs appear in fewer than 10% of studies. Qualitative and mixed-method approaches remain underrepresented.

Table 4.
Key Variables and Their Relationships

Variable Type	Variable Name	Frequency	Effect on Gap	Effect Size
Antecedent	Green Product Innovation	18	Reduces the gap through value creation	$\beta = 0.28-0.45$
Antecedent	Green Information Transparency	15	Reduces the gap through trust building	$\beta = 0.22-0.38$
Antecedent	Environmental Knowledge	24	Weak direct effect on the gap	$\beta = 0.12-0.21$
Mediator	Green Perceived Value	34	Strong mediator; value-based pathway	$\beta = 0.35-0.52$
Mediator	Green Trust	31	Strong mediator; trust-based pathway	$\beta = 0.28-0.44$
Mediator	Green Attitude	28	Partial mediator	$\beta = 0.25-0.40$
Moderator	Environmental Concern	26	Strengthens value/trust→behavior	$\Delta R^2 = 0.03-0.08$
Moderator	Price Sensitivity	14	Widens the gap when high	$\Delta R^2 = 0.02-0.06$
Moderator	Green Skepticism	11	Widens the gap; trust barrier	$\Delta R^2 = 0.04-0.09$

Integrative Framework and Propositions

Based on a systematic synthesis of reviewed literature, this section proposes an integrative framework explaining mechanisms bridging the attitude-behavior gap in green consumption. The framework synthesizes insights from Signaling Theory, Innovation Diffusion Theory, Theory of Planned Behavior, and Value-Belief-Norm Theory to provide a comprehensive understanding of how corporate environmental signals translate into consumer behavior through dual psychological pathways.

Dual-Pathway Framework

The integrative framework proposes that environmental signals, specifically green product innovation and green information transparency, influence green purchase behavior through two distinct but complementary pathways. The value-based pathway operates through green perceived value, representing cognitive evaluation of product benefits relative to costs. The trust-based pathway operates through green trust, representing affective assessment of corporate credibility and benevolence. Both pathways are moderated by environmental concern, functioning as a dispositional lens through which consumers

interpret environmental signals and determine the weight of environmental considerations in their decision matrix.

Theoretical Propositions

Proposition 1 (Value-Based Pathway): Green product innovation positively influences green purchase behavior through the mediating mechanism of green perceived value. Innovative green products enhance consumers' evaluation of functional, emotional, and environmental benefits, creating a perceived relative advantage that motivates behavioral engagement.

Proposition 2 (Trust-Based Pathway): Green information transparency positively influences green purchase behavior through the mediating mechanism of green trust. Transparent environmental communication reduces uncertainty and skepticism by providing verifiable information, enabling consumers to assess claim authenticity.

Proposition 3 (Relative Pathway Strength): In emerging markets characterized by high information asymmetry and greenwashing prevalence, the value-based pathway exhibits stronger effects on green purchase behavior compared to the trust-based pathway, as consumers prioritize tangible, verifiable product attributes over trust-based evaluations.

Proposition 4 (Moderating Mechanism): Environmental concern moderates relationships between psychological mediators and green purchase behavior, such that these relationships are stronger for consumers with greater environmental concern. Environmental concern activates personal norms, catalyzing the translation of cognitive and affective evaluations into behavioral commitment.

Discussion and Future Research Agenda

Key Insights

This systematic review reveals several significant insights regarding the attitude-behavior gap. First, theoretical fragmentation persists despite accumulated empirical evidence, with researchers employing diverse frameworks that frequently fail to integrate complementary perspectives. Second, the dual-pathway mechanism emerges as a robust explanatory framework, with value and trust representing distinct but complementary routes through which environmental signals influence behavior. Third, environmental concern functions not merely as an antecedent but as a critical moderator activating the behavioral translation process.

Research Gaps and Future Directions

Theoretical gaps include the underutilization of Signaling Theory despite its relevance to corporate-consumer environmental communication. Future research should examine how signal characteristics influence consumer response through different psychological pathways. Contextual gaps include limited investigation of emerging market specificity. Future research should examine how institutional characteristics shape the attitude-behavior relationship. Methodological gaps include overwhelming reliance on cross-sectional designs, precluding causal inference. Longitudinal research tracking attitude-behavior evolution would substantially advance understanding.

Theoretical Implications

This review advances theoretical understanding by clarifying the dual-pathway mechanism through which environmental signals influence behavior. The integration of Signaling Theory with consumer behavior theories provides a comprehensive framework accounting for both corporate signal transmission and consumer psychological processing. The identification of environmental concern as a moderating mechanism represents a

theoretical refinement with implications for understanding individual heterogeneity in gap magnitude.

Practical Implications

For practitioners, this review suggests that bridging the attitude-behavior gap requires orchestrated strategies addressing both value perception and trust formation. Investment in substantive green product innovation demonstrates commitment while enhancing perceived value. Transparent communication with verifiable environmental claims builds trust by reducing uncertainty. Segmentation based on environmental concern enables targeted strategies, with high-concern consumers responding strongly to environmental appeals while moderate-concern consumers may require emphasis on functional benefits.

Limitations

This review has limitations, including database selection potentially excluding relevant studies, temporal scope possibly missing foundational studies, focus on specific constructs overlooking alternative mechanisms, and inherent systematic review methodology limitations constraining the depth of analysis for individual studies.

CONCLUSION

This systematic literature review provides a comprehensive synthesis of research on the attitude-behavior gap in green consumption, employing the TCCM framework to organize and analyze findings across theoretical, contextual, characteristic, and methodological dimensions. The review reveals that despite substantial research attention, the gap persists as a fundamental challenge in sustainable consumption, driven by complex interactions between corporate signals, consumer psychology, and contextual factors.

The integrative framework proposed advances understanding by synthesizing dual-pathway mechanisms through which environmental signals influence behavior. The value-based pathway through green perceived value and the trust-based pathway through green trust represent complementary routes operating with varying strength depending on contextual conditions. Environmental concern emerges as a critical moderator catalyzing behavioral translation, explaining individual heterogeneity in gap magnitude.

The research agenda derived from identified gaps provides direction for advancing both theoretical understanding and practical application. Theoretical integration, longitudinal investigation, experimental validation, and contextual specificity represent priorities. For practitioners, the review emphasizes holistic strategies combining innovation, transparency, and segmentation to effectively bridge the gap between environmental attitudes and sustainable consumption behavior. As global environmental challenges intensify, bridging this gap becomes increasingly imperative for achieving sustainability transitions at scale.

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