Reimagining Marketing in a World of Limits:

Anti-consumption, Responsible Consumption, and Sufficiency

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Message from ICAR 2025 Conference Organizers

We were extremely pleased to welcome delegates to Montreal for the 2025 ICAR conference, where the International Centre for Anti-Consumption Research proudly celebrated its 20th anniversary. What a journey it has been! The Centre continues to unite scholars from across the globe to drive forward a vibrant and evolving stream of research.

The 2025 edition in Montreal underscored the increasing engagement amongst marketing and consumer researchers to promote an agenda that challenges frenetic consumption, reduce the speed of material accumulation and instant gratification, and promote values of inclusivity, care, and well-being. This milestone attracted a high number of strong submissions, resulting in 30 presentations over the two-day event, in addition to a plenary session in which Professor Michael S.W. Lee reflected on the evolution and growing relevance of anti-consumption research over the past two decades.

The program offered a wide variety of interesting topics to explore across eight thematic sessions – from digital sobriety and repair cultures to sufficiency –oriented lifestyles, responsible brand communication, and systemic perspectives on consumption reduction. These presentations reflected the growing interdisciplinarity of anti-consumption research, bridging marketing, sociology, psychology, among others. Collectively, they questioned dominant consumption paradigms and explored alternative ways of living and organizing in a world facing social and ecological limits.

The following proceedings of ICAR 2025 are a faithful record of the event, comprising 29 of the 30 presentations delivered in Montreal, grouped into the original eight themes used in the program, thereby providing a coherent thematic journey for readers.

The first cluster 'Responsible marketing' explores how marketing might evolve when sufficiency, restraint, and responsibility become guiding principles. The section opens with "Rethinking Brand Strategy through the Lens of Sobriety: A Qualitative Case Study on The Unscented Company," which shows how a brand operationalizes "sobriety" through minimalism in products, packaging, communication, and growth logic thereby advancing sobriety as an organizational ideology rather than a CSR add-on. This is complemented by "Expanding Marketing Boundaries Beyond Consumer Treadmill" (a whole-person/whole-society frame for sustainability in B2B) and "Consumer-Perceived Responsible Innovation" (a scale advancing adoption and anti-consumption effects). Together,

they set a normative and methodological baseline for responsible marketing practice and measurement.

The second set of papers were grouped under “Activism & Resistance”. Papers in this session foreground consumer citizenship and contention. “Sufficiency as a Mode of Collective Anti-Consumption” offers an ethnographic window into an anarchist cooperative practicing horizontal coordination and local autonomy to enact sufficiency. “Anti-Robots” analyses online discourses that condone or condemn vandalism against service robots, mapping moral justifications as resistance against automation and corporate power. “Citizens as Consumers” empirically links attitudes toward consumption with pro-environmental attitudes, policy advocacy, and behavioral intentions. Finally, “Culture Jamming: Adbusters” revisits detournement and intertextual tactics that destabilize brand meanings. As a set, these papers illustrate how anti-consumption also mobilizes political imaginaries, infrastructures, and emotions.

The third cluster of papers were presented in the thematic session “Zero Waste & Systemic Shifts”. Shifting the focus from ideological critique to systemic levers. “Zero waste@Coffee to go” examines precycling, which involves avoiding waste before it is created. “Methodological Advances for Scaling Responsible Consumption” applies geospatial analysis to protein consumption in Montreal to target environmental interventions and align policies with environmental justice. “Is Ø More Sustainable than O?” probes the Scandinavian = sustainable intuition, and “Are We Becoming More Responsible Tourists?” tracks responsible travel segments longitudinally. The through-line is methodological and institutional: scaling, targeting, and normalizing consumption reduction across domains.

The fourth set of papers were presented under the umbrella of “Influence & Communications”. Here, the focus is on how to shape lower-impact choices. “Effect of Price Transparency on Sustainable Consumption,” “Message framing and consumers’ purchase abstinence,” and “Nudging resistant consumers” collectively test message framing (abstract vs. concrete), product type, and transparency mechanisms to move consumers from intention to restraint. “Move over, logos” reframes symbolic rivalry as embodied, branded body movements, extending the expressivity of anti-consumption beyond conventional forms of verbal and oral communication. Together, these papers map the persuasion boundary conditions of restraint.

The fifth thematic group “Zero Waste & Sufficiency” returns to practice-level transitions. “The Institutionalization of Zero Waste and the Cracks in Practices” shows how a once-grassroots movement becomes stabilized through meanings, skills, materials, and supports. “Less-ish”

takes a critical look at marketing for sufficiency. “Wearing the Repair” differentiates visible vs. invisible mending, motivations, and stigma, and “The role of social comparison in the relationship between anti-consumption of clothing and subjective well-being” tests the social comparison dynamics tied to clothing restraint. Across these papers, sufficiency is visible as both cultural repertoire and lived routine.

Delving deeper into “Minimalism & Everyday Practices,” four papers examine inner motives, finances, and social justice as drivers of moderation. “Spirituality Increases Autonomy and Reduces Consumption” situates transcendence and agency as levers of de-materialization. “The Impact of Frugality on Loyalty Program Usage” reframes frugal consumers as strategic rather than abstinent market actors. “Anti-Consumption for Social Equity” surfaces community-led responses to maladaptive behaviors, and “Behavioral Determinants of Sustainable Investing” extends anti-consumption logic to financial portfolios and intertemporal trade-offs. The common concern is how everyday virtues and vulnerabilities assemble into durable restraint.

The penultimate session “Digital & Tech Futures” positions the attention economy as both problem and field for responsible innovation. “Sustaining Digital Engagement with Recycling Apps” highlights the role of institutional and infrastructural support in keeping pro-environmental digital behaviors active. “BANBR” presents an AI-driven, budget-aware grocery recommender for vulnerable consumers. “Rebalancing the Digital Life” compares public policy toolkits for digital well-being, while “Adolescents, Smartphones, and Digital Balance” documents ambivalence and nascent digital sobriety trends (e.g., flip-phone adoption), locating change at the practice level rather than the individual alone.

The closing theme “Paradoxes & Practices” ends with paradoxes and identity work. “Perfecting myself might break some eggs” shows how influencer aspiration can neutralize eco-guilt, complicating normative messaging. “Between Materialism and Environmental Values” investigates value contradictions across age, clarifying the psychological tensions that sustain “buy less” and “buy better” injunctions. Together, the set crystallizes why restraint is hard: identity, aspiration, and cultural logics continually pushing and pulling against limits.

Across all eight themes, an anti-consumption continuum emerges: from principles to practices, from individual attitudes to infrastructures, and from critique to tools. The proceedings show anti-consumption maturing into institutional, methodological, and policy toolkits whilst highlighting lived tensions, community voice, and ethical imperatives.

Overall, ICAR 2025 was both intellectually engaging and socially inspiring, fostering new ideas, collaborations, and friendships. The discussions throughout the sessions and informal gatherings provided fertile ground for critical thinking and reflection about the future of consumption and marketing.

Thanks to all authors who submitted papers. A special thanks to Alexandra Moreira and Cindy Moody, who did an amazing job before, during, and after the conference. A warm thank you also goes to the students of the UQAM theater school and their professor Raphaëlle Guigue, who delighted us with unique tote bags made from upcycled fabrics and handcrafted in Montreal.

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Rethinking Brand Strategy through the Lens of Sobriety: A Qualitative Case Study on The Unscented Company

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In the context of ecological urgency and growing resistance to overconsumption, sobriety has gained traction as a meaningful individual lifestyle (Kolli et al., 2024). This emerging lifestyle has also begun to influence brands who are rethinking growth by promoting sufficiency and reducing overconsumption (Kang et al., 2021). However, while consumer-side sobriety is widely documented, the company-side understanding, how sobriety translates into organizational practices and marketing strategies, remains largely unexplored and conceptually limited.

This study seeks to deepen our understanding of sobriety from a company perspective and clarify its conceptual foundations. Specifically, we aim to explore how brands operationalize sobriety through their marketing practices. Through this research, we intend to identify the dimensions through which sobriety is expressed and propose a more precise framework for understanding brand sobriety as a strategic posture.

Literature Review

Existing research primarily conceptualizes sobriety as an individual consumption behavior (Makri et al., 2020; Säpläcan & Márton, 2019). It refers to the intentional limitation of material possessions and mindful consumption (Kolli et al., 2024; Wilson & Bellezza, 2022). Consumer sobriety includes practices like deconsumption, second-hand acquisition, minimal packaging, and DIY (Jaeger-Erben et al., 2015; Monnot et al., 2014; Scott & Weaver, 2018). These practices challenge materialistic norms and associate well-being with non-material values, including mindfulness, autonomy, and social relationships (Guillard, 2019; Lee et al., 2020).

Few studies have examined how organizations internalize sobriety and reflect it in their operations and marketing communications (Kolli et al., 2024). Brand sobriety pushes the boundaries of corporate social responsibility by involving decisions that may contradict conventional business logic, such as limiting growth or minimizing sales (Lee et al., 2020).

Methodology

A qualitative case study design was employed, focusing on *The Unscented Company* (TUC), a Canadian brand that explicitly embraces sobriety. The case was selected for its information-rich potential and relevance to the conceptual exploration of brand sobriety. Three one-hour semi-structured interviews were conducted with the founder and two main executive members (the marketing and operations managers). Publicly available data on the company (corporate website, media interviews, social media) were also collected. Interviews were recorded, and both interviews and public data were transcribed and thematically coded (Spiggle, 1994). The two researchers coded independently and reconciled discrepancies by consensus. Interview insights were triangulated with public sources.

Results

The thematic analysis revealed four major dimensions of brand sobriety (verbatim in Appendix 1).

Sobriety as an Organizational Ideology

At TUC, sobriety is not merely a marketing posture, it is a core organizational value that drives a continuous quest for reinvention and responsibility. Sobriety is a commitment that pushes the brand to constantly improve its products, in a way that aligns with environmental considerations and minimalist principles, such as transforming liquid formulas into solid tablets and eliminating superfluous components. Rather than innovate for novelty's sake, the company innovates with purpose, embedding sobriety at the heart of both its identity and its operations.

Product and Packaging Sobriety

TUC adopts a minimalist philosophy in its product formulation, ensuring that products are fragrance-free, colorant-free, and water-free, while preserving only their functional essence. This simplicity is mirrored in the brand's approach to product lines and expansions that meets multiple consumer needs with the fewest items possible (Appendix 2). The packaging reflects this philosophy: standardized, sober-colored containers are designed, and a bulk sales model is employed, showcasing a commitment to circularity and waste reduction.

Promotion Sobriety and Sobriety Promotion

The brand limits its social media presence and adopts a quiet, thoughtful communication style, primarily focusing on inspirational and lifestyle-oriented content. For instance, out of 66 Instagram posts since January 1st, 2025, only 22 are product-focused. In comparison, Dove has published 88 posts during the same period, with 70 explicitly promoting their products. Their communication also aims to raise awareness of the benefits of sobriety and encourage a sober consumer lifestyle (Appendix 3). Consequently, the brand seeks to promote sobriety beyond its core activities.

Growth Sobriety and Sustaining Sobriety beyond the Company's Lifespan

The company demonstrates a deliberate hesitation toward growth for growth's sake, opting instead for a cautious approach. New product launches are only pursued when they align with the company's principles and respond to a legitimate consumer need. Additionally, TUC's logic of sobriety extends beyond the economic survival of the company; it entails an anticipated ecological responsibility, where product design choices, such as the use of unbranded, standardized containers, enable reintegration into reuse systems in the event of the brand's disappearance, reflecting a strong ethical commitment and a form of transcendence beyond the boundaries of the organization.

Discussion

This research contributes to the marketing and branding literature by articulating a conceptual framework of brand sobriety. It highlights sobriety as both a philosophical and strategic orientation. TUC's minimalist design, reduced product range, and low-key communication reflect a holistic alignment with sobriety principles.

The case of The Unscented Company illustrates how sobriety challenges traditional marketing assumptions, including growth, product diversification, and aggressive promotional tactics (Elgaaied-Gambier et al., 2025). Unlike CSR, which is often embedded in a growth-driven strategy (Zralek & Burgiel, 2020; Costa et al., 2021), sobriety calls for a redefinition of success, emphasizing minimalism, thoughtful growth, and ethical considerations that transcend even the company's existence. Therefore, sobriety is not an aesthetic, a CSR add-on, but as a guiding ideology that shapes organizational strategy and marketing operations. Moreover, the study of TUC demonstrates that brand sobriety is closely aligned with environmental values. TUC's commitment to limited innovation only when it "makes sense" provides an alternative approach for brands seeking to reduce environmental impact without falling into the trap of "green growth". In this context, sobriety emerges not as a restriction but as a distinctive value proposition.

However, our study also uncovers an inherent complexity in brand sobriety which manifests in tensions between visibility and minimalism, innovation and restraint, as well as growth and contentment. Future research should explore additional industry contexts, such as the food and fashion sectors. It should also consider sobriety from an organizational perspective by investigating how a sober approach allows to rethink our conception of work and productivity and fosters new work dynamics.

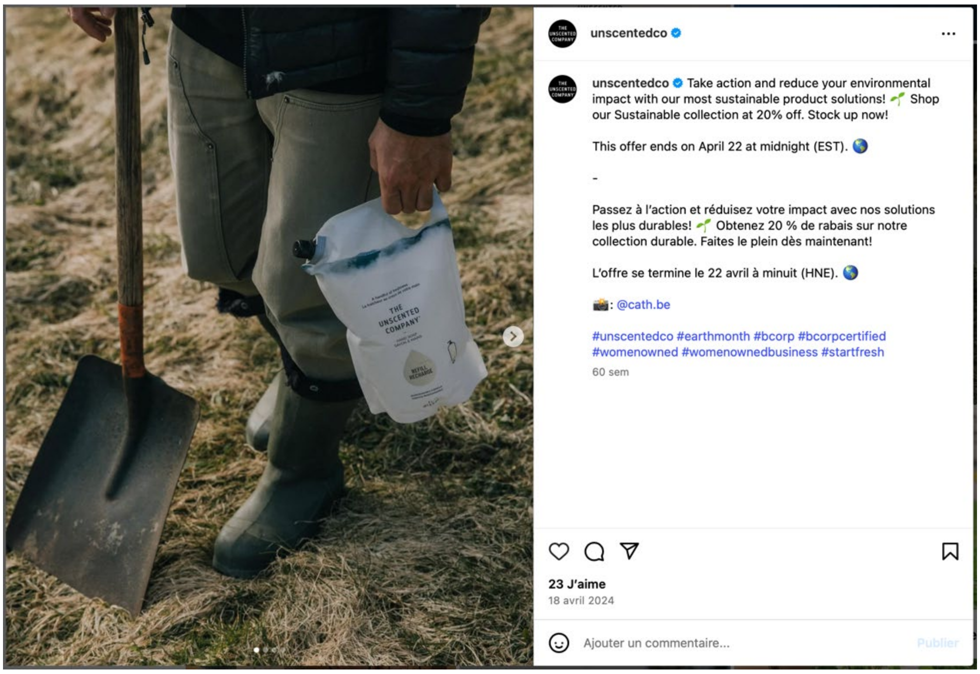
Appendix. 1

Themes	Verbatim
Sobriety as an Organizational Ideology	*The brand was born from Annie Rouleau's desire to offer a more eco-responsible product option. At first, that meant offering refills, but today we're completely reinventing the product. For instance, in 2024, we launched tablets that replace a toilet cleaner (H. T.)*
Product Sobriety and Packaging Sobriety	*There are really three levels: fragrance-free, all my bottles are free of dyes, and my labels don't hide the product (H. T.).* *We added solid products: dishwasher tablets, laundry tablets, shampoo bars, conditioner bars, and now we also have floor and toilet cleaning tablets (H. T.).* *When I built this company, I didn't want 768 different products… For me, it was about creating something smaller, more concise, that takes up minimal shelf space, a product line on a human scale (A. R)*
Promotion Sobriety	*I'm an entrepreneur, I'm 55 years old, I'm not on social media running and jumping with joy, always having something to say. I have a much softer approach as a person, and I think that shows in my brand (A. R)*

Sobriety Promotion	*We want to democratize refills so that people reuse their bottles 2, 3, even 20 times, it doesn't matter, but at least twice. That's the mission of the company (A. R)* "*We're trying to show people just how good it feels to refill your own bottle, how practical it is, how fun it can be*" *(H. T)*
Growth Sobriety	*We want to expand our offering, but only if it makes sense (A. R)* *We're not going to launch products just because competitors are moving fast. Sometimes those products disappear from the market a few months later. If we decide to launch something, it's because we've tested it, we believe in it, and it works (M. A).*
Sustaining Sobriety beyond the Company's Lifespan	*It was important to me that when the company ceases operations, I don't leave behind waste associated with TUC. That's why my generic bottle looks like any other and doesn't even carry our logo (A. R)*

Appendix. 2 Product categories of the TUC brand

Appendix. 3 Examples of TUC Instagram posts promoting sobriety



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Expanding Marketing Boundaries Beyond Consumer Treadmill: Sustainability Strategies Integrating the "Whole-Person in a Whole-Society" Framework and Foundational Qualitative Work in B2B Market

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Introduction:

Originally conceived as science and practice placing consumption as a means toward personal self- actualization and satisfaction (Arnould, 2024), marketing has fueled ever-increasing innovation and production, serving as key lever of continuous economic growth by keeping consumers on the endless needs and wants treadmill (White et al., 2025). The answers to the question of whether this is virtue or vice though have become increasingly polarizes as a function of whether one is on the mercantile vs social side of the well-entrenched divide that still structures society (Dubé, Jha, et al., 2014; Dubé et al., 2012). On the mercantile side, virtue lies in offering consumer what they need, liberating them toward the ultimate satisfaction (Cherrier & Murray, 2004). On the social side concerned with respect of the planet boundaries, climate change and inequity, virtuous marketing can be illustrated by the integration of Environmental, Social, and Governance (ESG) standards as suggested by White et al. (2025). ESG has gained significant popularity over the past two decades (De Falco et al., 2024) and is recognized as a key determinant of future value creation (Henisz et al., 2019; Savio et al., 2023; Zumente & Bistrova, 2021). For instance, Savio et al. (2023) positioned ESG as a paradigm shift from the traditional *homo economicus* focus on self- interest and individual profit to objectives of communal interest in the environment, inclusion, and sustainability. However, it is both self and communal interests that need to be integrated into value creation, acknowledging and accommodating the convergence of the two in impacting consumer decision making and behavior at any point of time and space.

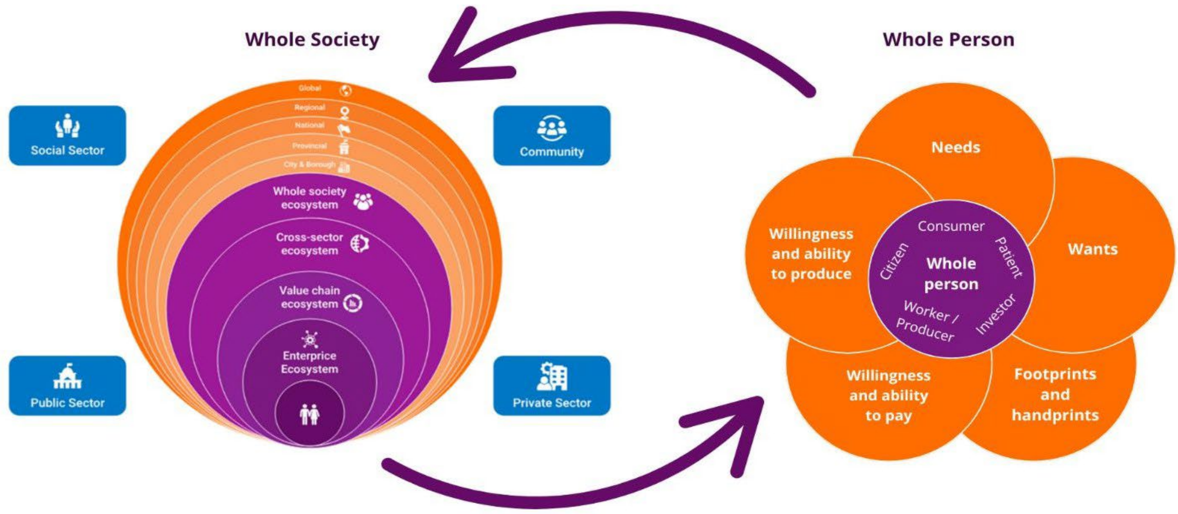
Moreover, the dual marketing perspectives above still rely on the dominant consumer-centric model of "sovereign consumer," which is now challenged by many marketing and consumer scholars (Arnould, 2024; Cherrier & Murray, 2004). These view consumer choice as independent of the environmental conditions in which individual choices are made, or at the other extreme, completely and unconsciously conditioned by contexts. The so-called “free will,” or individual freedom of choice assume unlimited information processing and self-control capabilities while, at the other extreme, a person is reduced to his/her consumption function manipulated by external forces out of one’s control. Yet, a person is more than his/her consumer role, and environmental contexts are conditioned and created by the many enterprises and institutions on both side of the mercantile/social divides, calling for both B2B and B2B2C marketing to raise to the challenge of serving as orchestrator of whole-society transformation toward sustainability (Kotler, 2011; Kuhlman & Farrington, 2010). Indeed, Nenkov (2024) asserts that it is imperative to design transformative solutions at the meso business-level in order to address these fundamental challenges.

In this paper, we present an integrative “Whole-Person in Whole-Society Framework” to foster a better convergence across divides, among the many motives, aspirations and limits of the person and the system. We then present early work on a case study illustrate how enterprises can serve as catalyst of such transformation toward sustainable consumption–production systems (Geels et al., 2023).

Framework:

In the age of planetary limits, the whole-person can no longer be reduced to a singular, autonomous decision-maker “consumer” seeking to satisfy his/her desires via this system of sign values governed by the logic of a cultural code (Cherrier & Murray, 2004). Instead, we must recognize the “Whole-Person in a Whole-Society” (Dubé, Addy, et al., 2014; Dubé, Jha, et al., 2014; Dubé et al., 2012; Dubé, Webb, et al., 2014). The concept of the "Whole-Person" recognizes that individuals' decisions, including consumption choices, are shaped by their needs, wants, willingness and ability to pay, willingness and ability to produce, and footprints and handprints. Furthermore, the "Whole-Person" recognizes that individuals' decisions are entangled multiple identities and roles such as consumer, worker, producer, citizen, and patient. This "Whole-Person" is situated within a “Whole-Society,” where they are part of a nested whole ecosystem shaped by enterprises, value chains, and cross-sectors ecosystems, which are influenced by the public, private, social, and community sectors. The “Whole-Person in a Whole-Society” views the individual and society as part of the same complex, dynamic, and adaptive system, shaping and being shaped by each other.

Figure 1 Whole-Person in a Whole-Society



This ontological repositioning invites marketing to engage in the systemic architecture of consumption that co-determines behavior and its (positive) impact within the system. As illustrated in Figure 1, depending on the role of the person at any given time and space, the actual decision in any exchange is likely to vary. From that standpoint, understanding the perspective of persons who are operating in key ecosystem enterprise, such as B2B food distribution, is important for sustainability transitions. In this paper, we particularly zoomed in on the role of workers who compose, manage and shape the key ecosystem enterprise, its decisions and its impact on the whole person.

Use case and results:

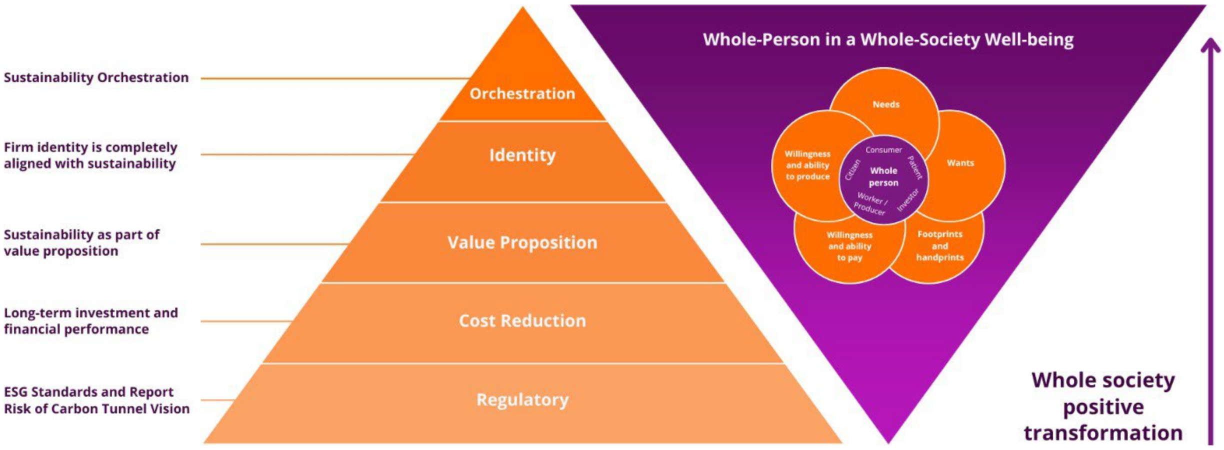
The enterprise that serves as case study is recognized as one of the leading wholesalers and distributors of food and related products in Canada, distributing over 10,000 food and non-food products from approximately 600 suppliers to approximately 8,000 clients. A series of semi- structured interviews were conducted with 22 managers of the company, covering the different departments, to explore their openness, willingness, potential impacts, and current challenges related to the integration and transition toward sustainability and ESG standards. The interviews were analyzed as part of an iterative thematic content analysis (Mucchielli, 2006).

Our thematic analysis reveals that managers express an openness to engaging in sustainability beyond compliance and profitability. While many sustainable practices are considered routine or common sense, they remain fragmented and disconnected from a formal sustainability strategy because the prevailing view is that sustainability is important, but that it's “not part of [your] official job”. This dichotomy highlights a broader challenge: integrating sustainability is not just about risk mitigation (Karwowski & Raulinajtys-Grzybek, 2021), accounting and reporting (Huang et al., 2022), or improving corporate image (Moon et al., 2023), it's about reconfiguring the company's culture toward sustainable value proposition and identity to align it with a sustainable economy, integrating the limits and capabilities of all stakeholders. Yet this alignment is hampered by fragmented data systems that fail to capture the full range of stakeholder expectations, willings and limits, ecosystem impacts, and institutional, material, and cognitive lock-in mechanisms (Geels, 2019).

The results also highlight that managers demonstrate a nuanced understanding of the potential cascading effects of sustainability integration, both upstream (e.g. production practices) and downstream (e.g. customers' product offering). They believe they are well positioned to have a real impact on their value chain, enabling them to influence the decision-making of the "whole person",
i.e. consumers and workers of partner companies, towards sustainability, by becoming an orchestrator of a sustainable food consumption and production system. Thus, marketing could evolve into an ecosystemic discipline, capable of navigating complexity, facilitating the co- creation of value between stakeholder groups, and harnessing data to align the “Whole-Person” needs, wants, willingness and ability to pay, willingness and ability to produce, and footprints and handprints in order to shape the production system and consumption environment, and responsibilize consumers (Cherrier & Türe, 2023).

The framework of sustainability transitions in consumption-production systems (Geels et al., 2023) provides a powerful lens to understand the “what,” “toward what,” and “at what scale” of systemic change. It emphasizes that transitions are not linear substitutions but dynamic reconfigurations of interdependent socio-technical and socio-environmental systems, shaped by niches, regimes, and landscapes. Drawing on our interviews and the hierarchical sustainability strategies proposed by Gabler et al. (2023), we propose a new framework of sustainability strategies and its possible impact on individual and collective well-being, as illustrated in Figure 2.

Figure 2 Sustainability Strategies for Whole Society Transformation



Building on the macro-level understanding of sustainability transitions (Geels et al., 2023), we introduce the notion of sustainability orchestration as a meso-level capability that operationalizes and accelerates such transitions within and across consumption–production systems. The left triangle articulates five ascending levels of sustainability strategy integration, from regulatory compliance to full "orchestration." At the bottom of the pyramid are companies, including our case study, that integrate sustainability into their operations since it is mandatory to report on ESG. At this level, companies risk having a carbon tunnel vision, i.e., an overly narrow focus on carbon emissions, ignoring all other dimensions of sustainability such as resource scarcity, biodiversity losses, inequality, overconsumption, etc (Daly et al., 2024), having little effect on the sustainability transition, and therefore on the whole person' well-being. The following three levels incorporate recognition of the importance of integrating sustainability into the business decisions and operations, whether that value is purely economic, strategic, or image-related. Finally, at the top of the pyramid, whereas the Multi-Level Perspective (MLP) illuminates structural dynamics of change (Geels, 2019), sustainability orchestration focuses on the strategic and organizational practices that can harmonize diverse roles, interests, and resources in ways that foster systemic well-being. Orchestration thus complements transitions research by answering the "how" question at the level of firms: how can organizations act as conductors of reconfiguration?

In this view, businesses, especially in B2B and B2B2C contexts, become more than regime actors adapting to landscape pressures; they can assume an active orchestration role, coordinating upstream suppliers, downstream customers, and societal stakeholders around shared sustainability- based values. By aligning fragmented practices, building integrative data and meaning infrastructures, cultivating adaptive governance, and moving toward a sustainable business model (Geissdoerfer et al., 2018), sustainability orchestration provides a mechanism to translate the abstract goals of sustainability transitions into concrete practices within organizations and supply chains, through gradual regime transformation (Geels, 2006). In short, sustainability transitions research (Geels et al., 2023) describes the structural conditions and trajectories of systemic change, while sustainability orchestration specifies the organizational agency required to steer such transitions at scale, bridging “Whole-Person in a Whole-Society” well-being.

The triangle on the right proposes then the possible positive transformation when the “Whole- Person in a Whole-Society” is integrated into managerial decisions. The closer a company comes to this sustainability orchestration, the greater its impact on the whole person in whole society’ well-being. Together, these two elements form a conceptual model in which marketing becomes a catalyst for systemic sustainability by redefining architectures of value, meaning and participation. Marketing managers, as our results show, are well placed to act as sustainability orchestrators, but this requires a paradigm shift and aggregated data. Moreover, companies, particularly in B2B contexts, are no longer mere intermediaries, but essential levers of systemic change, capable of influencing upstream suppliers and downstream customers (Nenkov, 2024) through a “sustainability orchestration” strategy.

Conclusion:

This paper advocates for a shift from marketing *to* consumers, to marketing *with* and *for* Whole- Persons in Whole-Societies. Such a repositioning calls for the integration of sustainability and behavior insights, and systemic thinking into marketing’s epistemological core to reimagine and reconfigure the architectures of choice, meanings, and values. In conclusion, we argue that marketing can contribute meaningfully to building resilient and equitable futures. But this contribution demands a deep ontological shift. Marketing must not only account for the desires of a “new consumer,” but participate in cultivating the material, social, and institutional conditions that allow the sustainable Whole-Person to emerge. With this in mind, we can reimagine marketing not as a tool for growth, but as a strategy for systemic well-being.

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Consumer-Perceived Responsible Innovation. Scale Development and Its Influence on Adoption and Anti-Consumption

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Introduction:

While innovation drives economic progress and societal advancement, it also entails risks - from threats to public health and environmental harm to social and economic disruptions. For instance, some consumers fear that autonomous vehicles like robotaxis could cause fatal accidents, or that technologies such as cultured meat may pose unforeseen health risks. These concerns often stem from skepticism about innovators' ability to anticipate and manage all potential dangers. Consequently, some consumers refrain from adopting such technologies - not due to technophobia, but as an ethical stance and a lack of trust in developers' sense of responsibility (Chaney & Lee, 2022; Huang et al., 2021; Laukkanen et al., 2007). This form of anti-consumption represents a conscious rejection of innovations deemed potentially irresponsible.

In response to these challenges, the concept of responsible innovation (RI) has emerged as a guiding framework aimed at aligning innovation with societal values and ethical considerations (Owen et al., 2013; Stilgoe et al., 2013). RI urges innovators to consider not only the benefits of new technologies - such as social progress, environmental protection, and economic resilience - but also to anticipate and address potential harms. It involves a dual commitment to "do good" and "avoid harm" (Voegtlin & Scherer, 2017). A widely accepted model is the AIRR framework, which outlines four core dimensions of responsible innovation: anticipation, inclusion, reflexivity, and responsiveness (Stilgoe et al., 2013). *Anticipation* involves efforts to envision both intended and unintended future outcomes of innovation and to assess potential impacts on various stakeholders. *Inclusion* refers to engaging a diverse range of stakeholders in the innovation process and/or to consider their perspectives. *Reflexivity* is the developers' critical reflection on their roles, motivations, assumptions, and responsibilities. *Responsiveness*

denotes the willingness and ability to adapt innovation processes in light of new knowledge, societal concerns, and stakeholder input. The dual commitment of ‘do good’ and ‘avoid harm’ can be understood as a high-level principle that underpins the operational dimensions of responsible innovation outlined in the AIRR framework, with each dimension serving as a lens through which this overarching principle is realized.

Despite growing attention to RI in academic and policy circles, consumer perspectives on responsible innovation remain underexplored. To address this gap, our study conceptualizes and empirically measures how consumers perceive responsible innovation. We introduce a new multi-dimensional scale - Consumer Perception of Responsible Innovation (CPRI) - grounded in the AIRR framework. This scale captures how consumers evaluate developers’ efforts to create responsible innovations. We propose and test that such perceptions influence both adoption and avoidance behaviors. Consumer who want to consume responsibly will prefer responsible innovations.

Our research follows a multi-step empirical process, including three pre-studies and three main studies (see Table 1). The first pre-study aimed to develop an initial item pool for each dimension, ensuring flexibility for later scale refinement. An initial set of 53 items was generated using various sources, including literature reviews, related scales, GenAI tools, and interviews with eight consumers. The second pre-study enhanced content validity and interrater reliability. Five experts in marketing and consumer behavior reviewed the items, resulting in a revised scale of 44 items (11 per dimension). The third pre-study refined the scale through a quantitative study (N = 242), using consumer perceptions of the AI image generator DALL·E by OpenAI as a test case. Based on exploratory factor analysis, we reduced the number of items and conducted an initial assessment of validity and reliability. The pre-studies resulted in an initial CPRI scale comprising 20 items.

Study 1 (N = 240) validated and refined the CPRI scale using the example of cultured meat from Upside Foods. Confirmatory factor analysis supported the scale’s factorial and discriminant validity. However, results showed that a shorter version with four items per dimension was more economical and performed better (Table 2). To assess whether the CPRI dimensions fit into a nomological network of related constructs, we calculated correlations with measures of consideration of future consequences, community advisement, reflexivity, and responsiveness. As expected, the highest correlations were found between each CPRI dimension and its corresponding validation scale. For criterion validity, we examined correlations between CPRI dimensions and five outcomes: perceived risk, perceived value, avoidance, usage intention, and positive WOM. All four dimensions negatively correlated with perceived risk; anticipation and inclusion also showed negative correlations with avoidance. All dimensions positively correlated with perceived value, usage intention, and positive WOM, with anticipation showing the strongest correlations across all five criteria.

In Study 2 (N = 326), we tested the CPRI scale using the example of robotaxis. The results confirmed the scale's four-dimensional structure. The nomological network was validated using four new measures of consideration of future consequences, efforts to promote diversity, self-reflection, and empathic concern. Criterion validity was assessed through adoption-related constructs from the technology acceptance model (Davis et al., 1989), including perceived ease of use, perceived usefulness, attitude toward use, and usage intention.

Study 3 (N = 160) examined the effect of consumer-perceived responsible innovation on anti-consumption, using the fictive example of an emotional support robot. Anti-consumption refers to the voluntary and conscious avoidance of certain products (Garima et al., 2025; Lee et al., 2009; Makri et al., 2020), motivated by factors such as sustainability, self-esteem, autonomy, and self-determination (Lee et al., 2009; Lasarov et al., 2019; Cherrier et al., 2011). This study focused on two types: voluntary simplicity and boycotting. We developed 10 items to measure voluntary simplicity, covering aspects such as consumption restraint, ecological responsibility, anti-materialism, self-sufficiency, and inner fulfillment. Following the logic of construct specification (Diamantopoulos & Winklhofer, 2001), we combined these items into an index, as each aspect contributes meaningfully to the overall construct of voluntary simplicity. A three-item boycotting scale was adapted from Lasarov et al. (2023). Results show that RI perceptions significantly influence anti-consumption behaviors, including both voluntary simplicity and boycotting (Table 3).

In sum, this paper offers several key contributions. Theoretically, it advances RI research by introducing a consumer-centered perspective and a novel conceptualization of how RI is perceived in the marketplace. Practically, it provides innovators and marketers with a reliable tool to gauge consumer trust in the innovation processes of emerging technologies. Notably, the study reveals that consumers may intensify anti-consumption and resistance behaviors when they perceive a lack of responsibility from developers. The new CPRI scale enables scholars to further explore the relationship between responsible innovation, innovation adoption, and anti-consumption behavior.

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Table 1. Overview of the scale development and validation process

Step	Study	Aim	Method	Results
1	Pre-study 1	Item generation	Literature research, interviews, AI tools	53 initial items
2	Pre-study 2	Content validation, item refinement	Expert validation with 5 marketing researchers	44 items (11 per dimension)
3	Pre-study 3	Factorial validity, scale purification	Survey, N = 242, Case: AI tool	20 items (5 per dimension)
4	Study 1	Scale purification, criterion validity, nomological network	Survey, N = 240, Case: cultivated meat	16 items (4 per dimension)
5	Study 2	Criterion validity, nomological network	Survey, N = 326, Case: robotaxis	16 items (4 per dimension)
6	Study 3	Criterion validity	Survey, N = 160, Case: emotional support robots	16 items (4 per dimension)

Notes. PCA – principal component analysis, CFA – confirmative factor analysis.

Table 2. Final four-dimensional scale with 16 items

Construct / Items	Loadings	
	Study 1	Study 2
The company …		
Anticipation		
... pursues long-term goals with the innovation that are responsible.	.766	.780
... engages in forward-looking activities to mitigate potential risks.	.762	.889
... employs anticipatory practices to ensure a future-proof innovation.	.822	.930
... contributes to a better future with its innovation.	.766	.737
Inclusion		
... takes into account diverse societal groups when defining innovation goals.	.716	.815
... actively involves stakeholders in the innovation process.	.826	.875
... integrates the viewpoints of different stakeholder groups into the innovation process.	.869	.874
... shares responsibility for the innovation with relevant stakeholders.	.664	.855
Reflexivity		
... regularly analyzes its own role within the innovation process.	.762	.795
... critically examines knowledge gaps in its research and development department.	.798	.851
... regularly assesses whether the innovation is economically, ecologically, and socially sustainable.	.824	.827
... gains a comprehensive understanding of the innovation’s impacts through continuous reflection.	.856	.880
Responsiveness		
... maintains flexible innovation goals that can be quickly adjusted to emerging changes.	.654	.765
... flexibly adjusts innovation goals to new scientific insights.	.791	.836
... recognizes that rapid adaptability is crucial for innovation progress.	.849	.846
... ensures that the innovation remains relevant by adapting to change.	.728	.852

Notes. Statistics based on CFA with R lavaan with maximum likelihood estimation. Study 1: $\chi^2 = 195.579$; df = 98; $\chi^2/df = 1.996$; CFI = .954; RMSEA = .064, Study 2: $\chi^2 = 353.077$; df = 98; $\chi^2/df = 3.603$; CFI = .942; RMSEA = .089.

Table 3. Effect on anti-consumption

	Anticipation		Inclusion		Reflexivity		Responsiveness	
	r	p	r	p	r	p	r	p
Voluntary simplicity	.-.218**	.006	-.230**	.003	-.213**	.007	-.125	.116
Boycotting	-.323***	<.001	-.195*	.014	-.250**	.001	-.215**	.006

Notes. Product-moment-correlation. Level of significance: *** p < .001, ** p < .01, * p < .05.

Sufficiency as a Mode of Collective Anti-Consumption: The case of an Anarchist Cooperative

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Drawing on the case of a self-managed food cooperative inspired by anarchist principles, this article explores how sufficiency operates as both a principle of internal governance and a mechanism of distancing from the market. Through a series of logistical and organizational choices grounded in sufficiency and autonomy, this cooperation builds a radically alternative provisioning model. In doing so, it makes it possible to reject traditional distribution channels and participate in structured anti-consumption, producing a silent yet active critique of the market. In this way, it reveals an embodied form of anarchism, expressed through collective practices and emancipatory forms of organization.

This study draws on literature from the field of anti-consumption (Cherrier & Murray, 2004; Lee et al., 2009; Chatzidakis & Lee, 2013) and anarchist organization (Portwood-Stacer, 2012; Parker et al., 2020) to analyze how sufficiency, embedded in the organizational practices of this cooperative, can embody a concrete form of resistance to market capitalism. It aims to explore how this self-managed organization makes a collective form of anti-consumption possible in everyday life and how the principle of sufficiency reshapes how members organize collectively and experience (anti) consumption.

Theoretical background:

Anarchist Organizations, anti-consumption, and sufficiency

Anarchist principles encourage the creation of spaces where the economy is freed from profit-driven logic and where direct democracy and horizontal governance become drivers of transformation (Land & King, 2014). These organizations function as experimental spaces in which social, economic, and political practices are developed in opposition to dominant power structures, thus bringing the principle of prefiguration to life (Maeckelbergh, 2011; Schiller-Merkens, 2024).

Portwood-Stacer (2012) follows this approach by studying anti-consumerist practices within anarchist movements, where alternative ways of living and consuming are experimented with outside the market. These practices embody a tactical form of resistance, rooted in everyday life, combining critical consumption with shaping the self as a political subject. This can be related to the sufficiency approach that "seeks to align current production and consumption levels with planetary boundaries while ensuring a decent standard of living for all" (Bruckner, 2023, p.17). This principle entails a material reduction and a normative repositioning, calling for the redefinition of well-being away from accumulation and toward autonomy and moderation. In this sense, sufficiency is not merely a consumption ethic, but a political stance and a mode of organizing.

Method:

We used a qualitative methodology to gain an in-depth understanding of sufficiency practices through a case study. Diony-Coop, located in Saint-Denis, is a French grocery store inspired by anarchist principles. This organization differs from traditional cooperative models through its radically horizontal structure and libertarian approach. A first store opened in 2015, and the cooperative has been very successful, opening a second store in 2017 and a third in 2020.

We collected data through direct observations from one Diony-Coop grocery store (welcome meetings, day-to-day activities during opening hours) and 14 semi-structured interviews with cooperators. Our sample consisted of 14 members, aged between 28 and 65, including employees, retirees, and activists. While their motivations varied, from ecological or ethical concerns to community spirit or affordability, they shared two key features: a strong orientation toward social engagement and a relatively high cultural and intellectual level. This shared background helps explain why members can invest in such an unconventional organizational model. It also makes it possible for them to enact sufficiency as a normative ideal and a concrete, everyday practice.

We also had access to secondary data, such as email exchanges between members through email lists, explanatory sheets about delivery logistics, purchasing procedures, etc.

Results:

Reappropriation of supply-chain control through sufficiency

One of Diony-Coop's core principles is collective control of its supply chain to practice sufficiency. Products are sourced from producers or wholesalers from the social and solidarity economy, prioritizing goods from small-scale farming and sustainable production methods. This reflects a deliberate effort to limit scale, to simplify logistics, and to reduce dependency on complex infrastructures. It is a form of organized sufficiency based on local autonomy and the rejection of overproduction.

Members themselves initiate the provisioning process. On a volunteering basis, each member (after a confirmation from the store treasurer) can supply the store with the products of his/her

choice. This radically decentralized model enables a shared responsibility.

However, this radical approach is not without challenges. Through their discussion in the email exchange list, members sometimes expressed frustration at product shortages or the absence of digital tools. In contrast, others debated whether sourcing from certain wholesalers compromises the cooperative's autonomy. These frictions illustrate how sufficiency is not a stable given, but a negotiated practice, constantly redefined through compromises.

This model embodies a concrete critique of large-scale retail through strong economic and logistical choices: no profit is made, products are sold at cost price, without any commercial margin. There are no cash registers in the stores and no computerized management tools. The goal is not to scale up, but to remain within limits that are manageable, transparent, and aligned with collective values. Diony-Coop promotes a form of logistical disintermediation to gain autonomy from systems that can become restrictive or controlling. As one member put it:

"With our very small forces, we are cutting a tiny piece out of the chain that goes from producer to consumer, passing through all the agri-food processors, wholesalers, and retailers — and that is already not bad!"

In this sense, the cooperative's logistical model enacts a politics of sufficiency: a quiet but radical refusal to participate in industrial food systems' excess and impersonal scale. This decentralized supply process also illustrates how sufficiency is enacted as local autonomy, limiting scale and dependency, consistent with anarchist principles of horizontal self-organization (King & Lang, 2014; Parker et al, 2020).

Politicization Through Practice:

Even though not all members identify as anarchists, libertarian principles shape daily practices and structure the organization's choices. Members are driven by various motivations (ethical, practical, or social), but the collective experience leads to personal transformations. Taking part in tasks, doing shifts, ordering products, discussing supplier choices, and interacting with other group members creates a form of political learning through practice. As stated by a member:

"Going to the coop means more than doing your grocery shopping — it means becoming part of a wider network of solidarity, of political reflection, of people who are also involved in other struggles."

This quote illustrates how the cooperative serves as a space where political subjectivities are shaped through action, linking everyday provisioning to social justice, mutual aid, and systemic critique. What begins as a functional task (buying food) becomes a collective practice of reordering priorities, grounded in cooperation and collective redefinition of needs.

In this process, the principle of sufficiency emerges not as an abstract ideal but as a lived, negotiated norm. By redefining what is "enough" regarding products, effort, and organization, members enact sufficiency as both a political commitment and an experiential mode of resisting consumerist excess. Through shared governance and mutual limitation, sufficiency becomes a medium for reconfiguring everyday life along emancipatory lines.

Discussion:

Diony-Coop, as a collective and self-managed structure, allows its members to experiment with another way of consuming and positioning themselves in relation to the market through a collective approach. However, differences in motivations occasionally generated tensions: for instance, while some members framed their involvement as an explicit political act, others insisted they were doing groceries differently. These contradictions highlight the multiplicity of ways sufficiency is lived and practiced.
By embedding sufficiency into logistics and governance, the cooperative makes a sustained distancing from dominant market logic possible. Anti-consumption is thus not rooted in individual conviction alone, but in a structure that supports, normalizes, and stabilizes it over time.

In the case of DionyCoop, practices such as cost-price sales or decentralized sourcing concretize anarchist principles like prefiguration and horizontalism, while simultaneously operationalizing sufficiency as moderation and autonomy.
This study contributes to shifting the focus from the consumer-subject to the organizational forms that make anti-consumption practices possible and sustainable. It shows how the collective practice of sufficiency can become a way to question and reshape market relations. Sufficiency, when embedded in governance and logistics, provides a stabilizing infrastructure for resisting market logics.
While our study is limited to a single cooperative rooted in a specific socio-political context, it opens avenues for exploring sufficiency as an organizing principle across other domains (e.g., low-tech communities, energy cooperatives...). Future research could examine how tensions around autonomy, scale, and logistics are managed in different forms of sufficiency-oriented organizations.

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Anti-Robots: Exploring Consumer Perspectives on Vandalism Toward Service Robots

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The increasing integration of service robots into daily life, particularly within retail and delivery sectors, has prompted both societal acceptance and controversy concerning human-robot interactions. While robots like Amazon Alexa, robotic vacuums, and autonomous delivery vehicles have become commonplace, recent media reports highlight instances of robot abuse, including vandalism, theft, and physical assaults (D'Angelo, 2022; Conybeare and Menitoff, 2023; Ramey, 2023). These behaviors have elicited polarized public reactions, ranging from condemnation to tacit approval, raising critical questions about the underlying motivations and societal implications of such antisocial conduct (Bromwich, 2019; Rubin, 2020). This paper aims to comprehensively explore consumer perspectives on robot abuse, emphasizing the psychological, ethical, and social factors that influence approval or disapproval.

Previous work has extensively studied anti-consumption behaviors with the lenses of deviance (Amine and Gicquel, 2011), customer retaliation (Heufner and Hunt, 2000), and brand transgressions (Khamitov et al, 2023), among others. While these behaviors and acts of anti-robot behavior share the commonality of stemming from frustrations and perceived injustices, or moral judgments, the anti-robot behavior may reflect attitudes of dehumanization or the perception that robots lack moral worth, thus justifying mistreatment. Unlike other misbehavior targets (e.g., service employees, customers, etc.), robots or automated systems are often perceived as lacking moral status or consciousness. Consequently, when consumers mistreat robots, they may do so without the same moral reservations. Such an attitude is grounded in the perception that robots are non-sentient beings and lacking moral agency.

Drawing from a review of the existing literature, we first define robot abuse within the context of service delivery robots, such as autonomous food and parcel delivery units, security robots, and other autonomous agents. Despite the proliferation of such robots, scholarly attention to the motivations behind their abuse remains limited. Existing studies have predominantly focused on acceptance factors (Shehawy et al., 2025; Gao et al., 2025) and prosocial behaviors (Chen and Huang, 2023), leaving a significant research gap concerning antisocial responses. To address this, the paper adopts a theoretical framework grounded in theories of moral reasoning (Turiel, 2001) and moral disengagement (Bandura, 1999), which elucidate how individuals cognitively justify or condemn abusive acts toward robots. These frameworks help explain why some individuals perceive robot abuse as morally permissible, often rationalizing it as a protest against automation, corporate greed, or societal inequalities, while others condemn such acts based on empathy, property rights, and ethical considerations.

The study employs a nethnographic methodology (Kozinets, 2014; Langer and Beckman, 2005) to analyze online discourses surrounding robot abuse, using data scraped from Reddit discussion forums and recent media reports from 2023-2025. This qualitative approach allows for the unobtrusive examination of authentic consumer sentiments and justifications. A total of over 4,600 posts were systematically coded into categories of condoning, condemning, or neutral responses. The analysis reveals nuanced themes: posts condoning robot abuse are frequently motivated by perceived threats to employment, resentment towards corporate practices, entertainment motives, curiosity, and societal inequalities. Conversely, posts condemning robot abuse emphasize respect for property, empathy for robots as sentient-like entities, concerns about future societal consequences, and moral responsibility.

Key findings demonstrate that approval of robot abuse is often driven by fears of job displacement, which individuals perceive as a form of protest against automation. Additionally, resentment towards corporate greed and profit-driven motives fuels justification for vandalism and theft, framing such acts as acts of rebellion or resistance. The thrill-seeking aspect and societal frustrations, such as socio-economic disparities and perceived dehumanization, further contribute to rationalizations for abuse.

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Citizens as Consumers: The Impact of Attitude toward Consumption on Pro-Environmental Attitudes, Behavioral Intentions, and Public Policy Advocacy

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Public policy should first and foremost be targeted at increasing the public good or solving public problems. Few issues are more public than those that surround the environment. Swim et al., (2010) state that consumption is arguably the more immediate and larger threat to the environment. So environmental policies inherently need to focus on people in their role as consumers. Page and Shapiro (1983) conducted a groundbreaking study which examined public policy data from the middle half of the twentieth century. They found that the major driver of public policy is the opinions held by the citizenry.

There appears to be a substantial difference in what people are willing to accept as citizens and what they are willing to do as consumers. Research has consistently shown that the programs that are popular are not effective and the programs that are effective are not popular (Attari et al., 2009; Dietz et al., 2007; Keller & McDougall, 1983). Citizens prefer voluntary and less burdensome policies. They are less willing to accept mandatory policies or ones that impact them financially. Unfortunately, the less burdensome policies seldom reach the desired outcomes because too few consumers are willing to make meaningful changes in their behavior. As a group, citizens seem to want to push the burden of environmental protection off on consumers.

However, when these same citizens move over into their role as consumers, these consumers seem unwilling as a group to engage in behaviors that will allow environmental policies to succeed (Goerg et al., 2025). To increase the effectiveness of environmental policies, people must change in their role as citizens and/or their role as consumers.

Those advocating for environmental change must find a way to make citizens become accepting of more burdensome environmental policies or make consumers more engaged with environmentally friendly behavior. In this paper, we explore the effect of people's attitude toward consumption on their environmental attitudes, behavioral intentions, and public policy advocacy. When environmental advocates understand how consumers' attitudes toward consumption drive their pro-consumption behavior, they are in a better position to understand the challenges before them in changing what citizens will accept or what consumers will do.

This research primarily addresses two research questions.

Research Question #1: Does the attitude one holds toward consumption affect a person's environmental attitudes, behavioral intentions, and public policy advocacy?

Research Question #2: How does attitude toward consumption interact with environmental awareness and concern to impact a person's environmental attitudes, behavioral intentions, and public policy advocacy?

Figure 1 presents five possible models for how the two antecedent variables of attitudes toward consumption (Attcon) and environmental awareness and concern (EAC) might impact the three dependent variables of environmental attitudes, behavioral intentions, and public policy advocacy. To simplify the models for presentation purposes, in Figure 1, environmental response (ER) incorporates all three dependent variables (i.e., environmental attitudes, behavioral intentions, and public policy advocacy).

Two of the models in Figure 1 only look at the bivariate relationships between the antecedents of EAC and Attcon and the dependent variables within ER. There is the Environmental Awareness and Concern Only Model and the Attitude toward Consumption Only Model. They consider EAC and Attcon independently without considering the other.

Three of the models in Figure 1 include EC, Attcon, and ER. There is the Parallel Effects Model where EAC and Attcon are both included in the model together as separate independent variables. Then there are the two models where Attcon. is involved in the relationship between EAC and ER. In the Attitude toward Consumption as a Mediator Model, the relationship between EAC and ER is explained (at least partially) by Attcon. Here, EAC impacts Attcon which then impact ER. The Attitude toward Consumption as a Moderator Model has Attcon strengthening the relationship between EAC and ER. Here, the impact of Attcon is not directly on ER but on the relationship between EAC and ER. The expectation of the current research was that the best model would include both EAC and Attcon, though we had no a priori expectation of which of the three models would be superior.

Methodology and Results:

To address these two research questions, a non-probability quota sample based on gender and age was contacted and asked to answer a questionnaire. As shown in Table 1, all measures were adapted from established scales that have been successfully used in other research.

Measures and Purification :

We followed the two-step approach recommended by Anderson and Gerbing (1988), to test the measurement quality of the indicators. The CFA of the model ($\chi(428)2 = 1732.51$, $p < 0.001$, RMSEA = 0.069 NNFI = 0.94, IFI/CFI = 0.95) indicates adequate fit. Next, the construct validity criteria were tested and met (see table 2). Our study tested for common method variance (CMV) using both the Harman's One Factor test and the marker variable in the CFA model. We found no evidence that it was biasing the overall results.

Testing the Competing Models

The results of the tests for the relationships within the first five models in Figure 1 are presented in Tables 3 and 4 and for the fifth model (the moderation model) are presented in Table 5. The five competing structures were compared following the guidelines provided by (Anderson & Gerbing, 1988) and Hayes (2013). Table 4 reports detailed results from analysis of the nested models and table 6 reports the selection criteria for all five models in Figure 1.

From Table 6 it is clear that the Attitude toward Consumption Only Model is the superior model. It explains a significant proportion of the variance in pro-environmental attitudes (24%),pro-environmental behavioral intentions (77%), and pro-environmental political actions (31%). Further it explains as much overall variance as the Parallel Effects Model but with fewer variables, thus showing superiority on the criteria of parsimony.

Discussion :

Stewart (2015) warned public policy researchers about falling into the "simplistic assumption" that, "if consumers were presented with more or different information, they would change their behavior" (p. 2). That seems to be an assumption one should avoid making when studying what it takes to change citizens and consumers environmental attitudes and behavior. So much of the pro-environmental public policy dialog focuses on how to convince people to become more concerned for the environment. However, there seems to be a huge predisposition toward or against consumption that must be considered in order to understand how people will receive environmental messages.

The results of the current study show that a person's attitude toward consumption has a direct impact on his or her environmental attitudes, behavioral intentions, and political activism. This effect is independent of a person's level of environmental concern. It does not appear to be a mediating or moderating variable. In fact, environmental concern adds little to the explanation of the environmental responses beyond that which is explained by attitude toward consumption.

So what does this mean for public policy and marketing? Those who study marketing have significant insights to offer public policy makers as to how they can best achieve their objectives (Stewart, 2015). If there is one thing that marketing does well is that it keeps the focus on the consumer. When other social scientists study pro-environmental behavior, they have not tended to look at people as consumers. When public policy makers are working to protect the environment, they tend to see citizens only and not consumers. Those familiar with effective marketing practices are quick to see people in their role as consumers first. That is a perspective that can benefit environmental policy advocates and others who look at pro-environmental issues.

Table 1
Measurement Items

Scale/Items *	Standardized Loading (t-values)	Source/adapted from
Micro Anti-Consumption		Iyer and Muncy (2016)
I try to recycle as much as I can.	0.78 (22.03)	
I make specific efforts to buy products made out of recycled material.	0.63 (16.85)	
I like it when I find a way to conserve.	0.77 (21.79)	
Micro Pro-Consumption		Iyer and Muncy (2016)
I would love to be able to buy some very expensive jewelry.	0.71 (19.51)	
I love to shop.	0.71 (19.56)	
It seems like the more expensive something is, the more I want it.	0.79 (22.46)	
When I buy nice things, it usually makes them feel good about myself.	0.71 (19.47)	
Some people are spenders and some people are savers, I am a spender.	0.72 (19.68)	
Macro Anti-Consumption		Iyer and Muncy (2016)
If we all consume less, the world will be a better place.	0.64 (16.92)	
We must all do our part to conserve.	0.73 (20.10)	
We should be more interested in saving the earth than growing the economy.	0.75 (21.01)	
It would benefit future generation if people today would quit consuming so much.	0.80 (22.88)	
Macro Pro-Consumption		Iyer and Muncy (2016)
Consumer spending helps us all by keeping the economy growing.	0.82 (23.44)	
A growing economy is good for all of us.	0.76 (21.05)	
The economy suffers when people stop spending their money.	0.72 (19.62)	
When I spend my money, it helps others and not just me.	0.65 (17.36)	
Pro-environmental Political Attitudes (PEPA)		Cordano, Welcomer and Scherer (2003)
I do not support further government actions targeted at preventing global warming. [+]	0.83 (23.91)	
The government needs to leave consumers alone to quit pandering to environmentalists. [+]	0.85 (24.86)	
The free market, not the government, should deal with waste disposal issues. [+]	0.76 (21.34)	
Pro-environmental Political Actions (PEPACT)		Cordano, Welcomer and Scherer (2003)
I would participate in a protest against a company that is harming the environment.	0.88 (27.25)	
I would participate in protests against current environmental conditions.	0.95 (31.09)	
I plan to participate in events organized by environmental groups.	0.75 (21.72)	
Pro-environment Behavior (PEB)		Cordano, Welcomer and Scherer (2003)
Whenever possible, I try to recycle.	0.85 (25.78)	
I try to conserve water.	0.82 (24.53)	
To do my part in protecting the environment, I always make sure to turn off the lights when I leave the room.	0.72 (20.37)	
I would consider myself an environmentally conscious consumer.	0.79 (23.27)	

Continued…

Table 1 (continued)

Scale/Items *	Standardized Loading (t-values)	Source/adapted from
Environmental Concern (EC)		Dunlap, van Liere, Mertig and Jones (2000)
When humans interfere with nature, it often produces disastrous consequences.	0.81 (23.08)	
The balance of nature is very delicate and easily upset.	0.85 (24.70)	
Humans are severely abusing the environment.	0.69 (18.87)	
Awareness of Consequences (AWC) (extremely dangerous to not dangerous at all)		Dietz, Stern and Guagnano (1998)
In general do you think, air pollution caused by cars is…+	0.83 (24.96)	
In general do you think the way we are disposing of our trash is…+	0.89 (27.81)	
In general do you think that our human's current treatment of the environment is…+	0.86 (26.25)	

+ are reverse coded items.

Table 2
Correlations and Descriptive Statistics

Measure	MiAC	MiPC	MaAC	MaPC	PEPA	PEPACT	PEB	EC	AWC
Micro Anti-Consumption (MiAC)	0.75								
Micro Pro-Consumption (MiPC)	-.03	0.85							
Macro Anti-Consumption (MaAC)	.46**	-0.06	0.82						
Macro Pro-Consumption (MaPC)	.30**	0.03	.27**	0.83					
Pro-environmental Political Attitudes (PEPA)	.09*	-0.10*	.31**	-.02	0.86				
Pro-environmental Political Actions (PEPACT)	.32**	.13**	.31**	-.04	.23**	0.90			
Pro-environmental Behavior (PEB)	.63**	-.19**	.42**	.28**	.18**	.31**	0.87		
Environmental Concern (EC)	.36**	-.05	.49**	.23**	.27**	.35**	.43**	0.83	
Awareness of Consequences (AWC)	.13**	-0.11*	.29**	.08*	.35**	.17**	.19**	.37**	0.90
Mean	4.62	3.81	4.86	5.40	3.71	3.66	5.00	4.81	3.00
Standard Deviation	1.25	1.36	1.08	0.99	1.36	1.43	1.27	1.21	1.24
Variance Extracted	0.52	0.53	0.54	0.55	0.66	0.75	0.63	0.62	0.74

Note: Construct reliabilities are show on the diagonal
** $p < .01$
* $p < .05$

Table 3
Analysis of Nested Models

Model	$\chi^2_{(df)}$	*p-value*	*RMSEA*	*NNFI*	R^2
Measurement	$1732.51_{(428)}$	0.00	0.069	0.94	
Environmental Concern	$2173.38_{(443)}$	0.00	0.078	0.92	
• Pro-environmental Political Attitudes					0.21
• Pro-environmental Political Actions					0.23
• Pro-environment Behavior					0.43
Attitude towards Consumption	$1824.67_{(437)}$	0.00	0.07	0.94	
• Pro-environmental Political Attitudes					0.24
• Pro-environmental Political Actions					0.31
• Pro-environment Behavior					0.77
Attitude towards Consumption as a Mediator	$1818.85_{(437)}$	0.00	0.07	0.94	
• Micro Anti-Consumption					0.33
• Macro Pro-Consumption					0.13
• Macro Anti-Consumption					0.44
• Micro Pro-Consumption					0.02
• Pro-environmental Political Attitudes					0.24
• Pro-environmental Political Actions					0.31
• Pro-environment Behavior					0.77
Parallel Effects Model	$1744.52_{(431)}$	0.00	0.069	0.94	
• Pro-environmental Political Attitudes					0.27
• Pro-environmental Political Actions					0.33
• Pro-environment Behavior					0.76

Table 4
Completely Standardized Estimates of the Various Models

Relationships	Environmental Concern Only Model		Attitude towards Consumption Only Model		Attitude towards Consumption as a Mediator		Parallel Effects Model	
	Path estimate	*t-value*	*Path estimate*	*t-value*	*Path estimate*	*t-value*	*Path estimate*	*t-value*
EC → PEPA	0.24	4.87			0.12	1.40	0.10	1.62
EC → PEPACT	0.47	9.66			0.30	3.90	0.28	4.69
EC → PEB	0.70	13.74			0.15	2.36	0.18	3.70
AWC → PEPA	0.30	6.12			0.25	5.22	0.25	5.21
AWC → PEPACT	0.01	0.24			0.02	0.52	0.03	0.60
AWC → PEB	-0.10	-2.19			0.02	0.46	0.02	0.57
MiAC → PEPA			-0.06	-0.91	-0.06	-1.02	-0.07	-1.11
MiAC → PEPACT			0.34	5.79	0.23	4.38	0.27	4.59
MiAC → PEB			0.88	14.93	0.75	13.92	0.82	14.20
MaPC → PEPA			-0.19	-3.83	-0.15	-3.26	-0.15	-3.20
MaPC → PEPACT			-0.30	-6.58	-0.27	-6.17	-0.29	-6.46
MaPC → PEB			-0.05	-1.37	0.02	0.61	-0.04	-0.97
MaAC → PEPA			0.53	8.44	0.31	4.78	0.34	5.01
MaAC → PEPACT			0.34	6.12	0.16	2.85	0.17	2.76
MaAC → PEB			-0.02	-0.32	-0.02	-0.53	-0.12	-2.24
MiPC → PEPA			-0.09	-2.01	-0.07	-1.63	-0.06	-1.55
MiPC → PEPACT			0.17	4.35	0.17	4.26	0.18	4.50
MiPC → PEB			-0.15	-4.54	-0.17	-5.31	-0.15	-4.61
EC → MiAC					0.61	11.33		
EC → MaPC					0.40	7.44		
EC → MaAC					0.63	11.18		
EC → MiPC					-0.04	-0.76		
AWC → MiAC					-0.09	-1.85		
AWC → MaPC					-0.13	-2.63		
AWC → MaAC					0.07	1.53		
AWC → MiPC					-0.10	-1.91		

Table 5
Testing the Moderating Effects of Consumption on Pro-Environmental Political Attitudes, Actions and Behavior

Dependent Variable: *Pro-Environmental Political Attitudes (PEPA)*		Independent Variable: *Environmental Concern (EC)*			Dependent Variable: *Pro-Environmental Political Attitudes (PEPA)*		Independent Variable: *Awareness of Consequences (AWC)*		
Moderating Variable: MiAC		*Effect*	*t*	*Result*	Moderator effect:		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.1155	-0.7221	NS	Moderator level	*Low*	-0.0164	1.5043	NS
	High	-0.0534				*High*	0.1240		
Moderating Variable: MaPC		*Effect*	*t*	*Result*	Moderating Variable: MaPC		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.1658	-1.4171	NS	Moderator level:	*Low*	0.1171	4.8832	S
	High	0.0268				*High*	0.2761		
Moderating Variable: MaAC		*Effect*	*t*	*Result*	Moderating Variable: MaAC		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.1269	-0.4716	NS	Moderator level:	*Low*	0.0008	1.9837	S
	High	0.0777				*High*	0.1573		
Moderating Variable: MiPC		*Effect*	*t*	*Result*	Moderating Variable: MiPC		*Effect*	*t*	*Result*
Moderator level:	*Low*	0.0193	2.4551	S	Moderator level:	*Low*	-0.1246	-1.6213	NS
	High	0.1737				*High*	0.0119		

Dependent Variable: *Pro-Environmental Political Actions (PEPACT)*		Independent Variable: *Environmental Concern (EC)*			Dependent Variable: *Pro-Environmental Political Actions (PEPACT)*		Independent Variable: *Awareness of Consequences (AWC)*		
Moderating Variable: MiAC		*Effect*	*t*	*Result*	Moderating Variable: MiAC		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.0457	0.3504	NS	Moderator level:	*Low*	-0.0350	1.1147	NS
	High	0.0656				*High*	0.1268		
Moderating Variable: MaPC		*Effect*	*t*	*Result*	Moderating Variable: MaPC		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.0816	0.1706	NS	Moderator level:	*Low*	-0.0853	0.3563	NS
	High	0.0972				*High*	0.1231		
Moderating Variable: MaAC		*Effect*	*t*	*Result*	Moderating Variable: MaAC		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.0702	-0.1421	NS	Moderator level:	*Low*	-0.0677	0.5912	NS
	High	0.0602				*High*	0.1260		
Moderating Variable: MiPC		*Effect*	*t*	*Result*	Moderating Variable: MiPC		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.0336	0.9989	NS	Moderator level:	*Low*	0.0875	4.2013	S
	High	0.1030				*High*	0.2410		

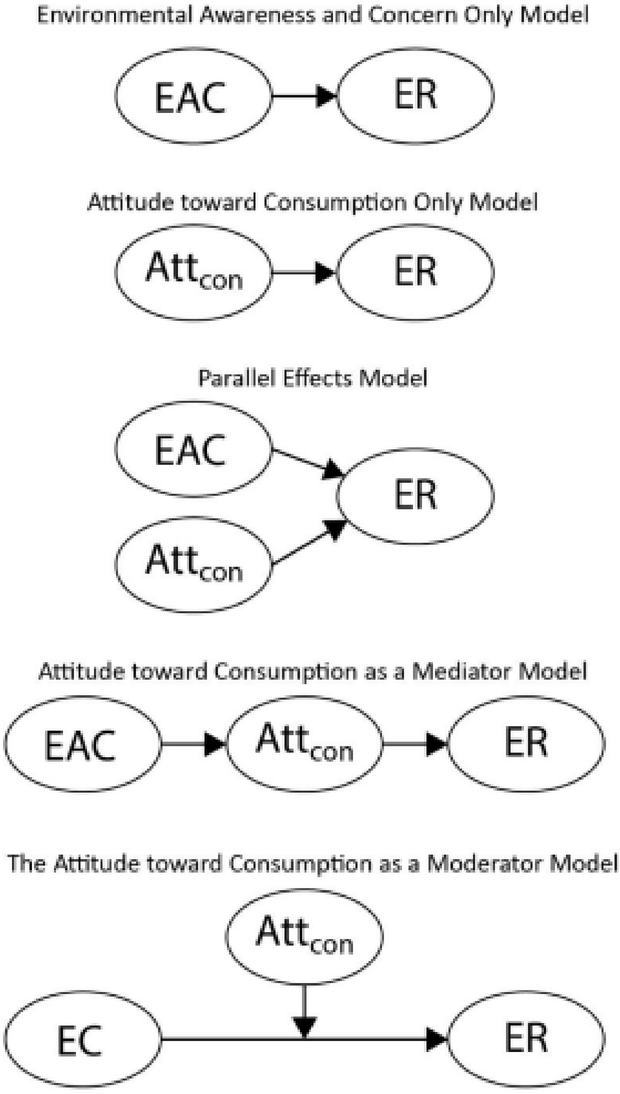
Table 5 (cont.)

Dependent Variable: *Pro-Environmental Political Behavior (PEB)*		Independent Variable: *Environmental Concern (EC)*			Dependent Variable: *Pro-Environmental Political Attitudes (PEPA)*		Independent Variable: *Awareness of Consequences (AWC)*		
Moderating Variable: MiAC		*Effect*	*t*	*Result*	Moderator effect:		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.1281	-3.3104	S	Moderator level	*Low*	-0.0210	1.5610	NS
	High	-0.0327				*High*	0.1072		
Moderating Variable: MaPC		*Effect*	*t*	*Result*	Moderating Variable: MaPC		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.1295	-1.4794	NS	Moderator level:	*Low*	-0.0979	0.2254	NS
	High	0.0182				*High*	0.1233		
Moderating Variable: MaAC		*Effect*	*t*	*Result*	Moderating Variable: MaAC		*Effect*	*t*	*Result*
Moderator level:	*Low*	-0.1461	-3.0624	S	Moderator level:	*Low*	-0.0058	1.7969	NS
	High	-0.0319				*High*	0.1314		
Moderating Variable: MiPC		*Effect*	*t*	*Result*	Moderating Variable: MiPC		*Effect*	*t*	*Result*
Moderator level:	*Low*	0.0068	2.2129	S	Moderator level:	*Low*	0.0683	4.2540	S
	High	0.1135				*High*	0.1854		

Table 6
Model Selection Criteria

Model	χ^2 /*df*	*AIC*	*ECVI*	*CAIC*	*PNFI*	*# Hypotheses Supported*
Measurement	4.05	1932.51	2.98	2480.05	0.80	NA
Environmental Concern	4.91	2343.28	3.63	2808.79	0.82	5 of 6 (83.33%)
Attitude towards Consumption	4.18	2006.67	3.10	2504.94	0.82	9 of 12 (75 %)
Parallel Effects	4.05	1938.52	2.99	2469.64	0.81	12 of 18 (66.67%)
Attitude towards Consumption as a Mediator	4.16	2000.85	3.09	2499.11	0.82	15 of 26 (57.69%)
Attitude towards Consumption as a Moderator						8 of 24 (33.33%)

Figure 1:
Five Competing Models Tested in the Current Research



EAC = *Environmental awareness and concern* which represents both environmental awareness (awareness of consequences of dangers to the environment) and environmental concern.

Att$_{con}$ = *Attitude toward consumption* which represents macro pro-consumption, macro anti-consumption, micro pro-consumption, and micro anti-consumption.

ER = *Environmental response* which represent pro-environmental political attitudes, pro-environmental political actions, and pro-environmental behavior.

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Culture Jamming, Intertextuality, and Détournement: A Case Study of Adbusters

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Culture jamming involves media activists that collectively represent a social movement opposed to the hold that corporations have over our society. Culture jammers are particularly concerned about the ability of corporations to shape culture through advertising and respond by engaging in “the practice of parodying advertisements and hijacking billboards in order to drastically alter their messages” (Klein 2000, p. 280). Culture jamming describes a subversive practice designed to expropriate and sabotage the meaning of commercial messages. By subversive, it is meant that culture jammers engage in practices attempting to overthrow what are typically corporate (for-profit) messages. Expropriate refers to endeavors toward transferring property from its owner to a domain of public use, whereas sabotage indicates deliberate destruction.

Historically, conventional marketing thought involved strategically controlling brand communication at the various consumer touch points. For Kotler and Zaltman, marketing management described “the analysis, planning, implementation, and control of programs designed to bring about desired exchanges with target audiences for the purpose of personal or mutual gain” (1971, p. 4). More than 30 years later, Duncan put forward the following definition of integrated marketing communication (IMC): “a cross-functional process for creating and nourishing profitable relationships with customers and other stakeholders by strategically controlling or influencing all messages sent to these groups and encouraging data-driven, purposeful dialogue with them” (2002, p. 8). The notion of controlling marketing communication is common to both definitions, yet consistent with the idea of detournement – as offered by Guy Debord and the Situationists – culture jammers try to reverse and ‘turn around’ the interpreted meaning, thereby countering what was initially intended by the producers of the message (Lasn 1999).

The notion of détournement suggests that culture jammers first need an existing text or promotional message to culturally recycle, rework and reverse, which implies that culture jamming is commonly an obvious demonstration of intertextuality (i.e., conditions whereby cultural narratives and texts, such as advertising, are constructed and read through a process of sharing and cross-referencing with other narratives and texts). As noted by Fiske, “the theory of intertextuality proposes that any one text is necessarily read in relationship to others” (1987, p. 108) and that “the meanings generated by any one text are determined partly by the meanings of other texts to which it appears similar" (1990, p. 166).

Intertextuality did not appear to gain currency among scholars in marketing communications and consumer studies research until the late 1990s (e.g., Hirschman, Scott, and Wells 1998; Hitchon and Jura 1997; Kates and Shaw-Garlock 1999; O'Donohoe 1997a, 1997b). First developed and popularized during the late 1960s by French literary theorist and textual analyst, Julia Kristeva, intertextuality is defined as the passage of one (or several) sign system(s) into another. According to Kristeva, this signifying process:

...involves an altering of the thetic [sic] position - the destruction of the old position and the formation of a new one. The new signifying system may be produced with the same signifying material... Or it may be borrowed from different signifying materials... If one grants that every signifying practice is a field of transpositions of various signifying systems (an inter-textuality), one then understands that its 'place' of enunciation and its denoted 'object' are never single, complete, and identical to themselves, but always plural, shattered, capable of being tabulated. (1984, pp. 59, 60)

There are manifold ways in which any one text is inseparably inter-involved with other texts; for Kristeva, each text, which is a structure that is put together with signs to symbolize or communicate meaning, represents a site in which a myriad of other texts is intersecting (Abrams 1993; Wernick 1991). A central point for culture jamming is that single spoof ads need not 'reinvent the wheel' but can leverage copy strategies from the original advertising campaigns of corporations or brands that are the subject of parody.

This study uses intertextuality as a conceptual foundation to study culture jamming from the Adbusters Media Foundation. Adbusters is considered "the mouthpiece of the anti-consumption movement" (Zavestoski 2002, p. 122). For this study, depth interviews were done with Kalle Lasn – the founder of Adbusters – in Vancouver at the headquarters of Adbusters. The interviews – roughly 90 minutes in duration – were semi-structured and the discussion guide included questions relating to factors that prompt a particular brand or corporation to become the subject of culture jamming or spoof ads, how culture jamming has evolved from being the practice of parodying ads and hijacking billboards, the role of social media in social change, and whether Adbusters can point to any successes. Questions were informed, in part, by critically reviewing Lasn's book, Culture Jam. Lasn (1999), for example, identifies Philip Morris, the producer of Marlboro and Virginia Slims cigarettes, as his mortal enemy that he vows to take down within the dedication page of his book. Thus, one additional question asked pertained to why Lasn would identify Philip Morris as his mortal enemy. Further, serving as projective techniques, Lasn was provided with copies of parody ads from Adbusters and queried about the purposes and goals of the ads as well as who the ads were trying to influence and what's being communicated. Discussion also took place about which parody ads were thought to be the most or least effective. The interviews were audio-taped, transcribed, and detailed field notes were made for subsequent review, analysis, and interpretation.

Findings reveal that parody ads put forward by Adbusters often pertain to U.S. brands, which does not appear coincidental given Lasn's pronouncements that "American cool is a global pandemic" (1999, p. xiv) and "the world needs to be liberated from American values and culture, spreading across the planet as if by divine providence" (1999, p. 61). For Lasn, globalization is largely equated with Americanization (and the pervasiveness of American brands), and he is concerned about determined efforts for a global economy and consequent cultural homogenization. The common targets of culture jamming activities by Lasn and Adbusters are American brands, which are sold globally and convey the good life of America.

There is a level of irony in assessing the extent that Adbusters incorporates and applies marketing principles. Although Lasn (1999) indicates that he and his fellow culture jammers seek to stop the 'branding' of America, as well as consumers' fixation on icons and brand names, they have simultaneously embraced branding principles as a part of their social movement. According to Lasn, "We [culture jammers] believe we can launch a new brand and beat AmericaTM in a meme war" (1999, p. 127). It is acknowledged that meme warfare does involve imitation and generating attention by leveraging the iconic brand elements that companies have spent considerable time on and resources building. Indeed, the parody ads discussed have mimicked the typography, layouts, and spokes-characters that are highly familiar from brand advertising. Still, it will be further discussed to what extent culture jammers' efforts to 'turn around' interpreted brand and promotional meanings – the extent that spoof ads exemplify a message reversal in the spirit of detournement – appear to be successful.

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Zero waste@Coffee to go: How precycling fosters sustainable consumption

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Introduction:

Plastic waste consumption statistics of 2023 per capita like 69 kilograms (US) or 43 kilograms (Germany; World Population Review, 2025) demonstrate the importance of waste avoidance. Despite occasional policies prohibiting disposal of some waste (e.g., polystyrene to-go cups), more needs to be done. Consumers also become increasingly reflected regarding waste avoidance. The so-called "precycling" (i.e., reduce waste by thinking ahead when you buy) is emerging as a lifestyle, aiming to minimize through long-term-planning, resourcefulness, and reuse for circularity (Lundberg et al., 2024). This distinguishes precycling from related waste-handling concepts, particularly in terms of the timing of purchase (Table 1).

For over two decades, research investigated waste avoidance. Initially, studies emphasized an industrial perspective (e.g., Binnemans et al., 2015) while consumer behaviour like precycling has only recently gained attention (Table 1). However, precycling has been rarely studied in realistic, daily-life applications contexts.

To fill this void, the "Bring Your Own Cup" (B.Y.O.C.) initiative appears appropriate; not only because more consumers question the extent to which disposable dishes like coffee cups, mostly used short-lived, can be avoided. Leveraging this heightened awareness, also established companies nowadays offer B.Y.O.C. options (e.g., Starbucks, 2024).

Thus, we dedicate this study to precycling behaviour in the context of coffee-to-go consumption in a B.Y.O.C. setting. Our research investigates which factors influence consumers to precycle and intend to use these options, also considering frugality, convenience, environmental self-efficacy and price consciousness.

Framework:

In our research framework (Figure 1), precyclers focus on the sufficient use (and protection) of available resources, emphasizing longevity and durability. Such a lifestyle prerequisites frugality (manifested through sufficiency) advocating mindful consumption, resource conservation, and waste reduction. For precyclers, this encompasses the efficient use of energy, raw materials, and financial resources (Lastovicka et al., 1999). Since monetary factors arguably influence decisions, financial thrift–as a form of frugality–may motivate consumers as B.Y.O.C. reduces seller cost and may lead to price concessions. Consequently, such campaigns often offer discounts. We thus pose that frugality encourage precycling behaviour (H1a).

Precycling requires reflection on purchasing decisions and can be characterized as the opposite of impulsive, externally driven acts aimed at short-term satisfaction (Lim, 2017; Hüttel et al., 2020). Consequently, precyclers tend to plan their consumption and act with foresight, showing less focus for convenience (Klug & Niemand, 2021). Thus, consumers with a high convenience orientation arguably avoid precycling (H1b). Since precycling is assumed to be voluntary and conscious, it is reasonable to link past precycling future intentions (e.g., Ouellette & Wood, 1988), leading to the hypothesis that previous precycling behaviour increases the B.Y.O.C. intention (H2).

Since pro-environmental motives might be activated in B.Y.O.C. initiatives, a potential moderator between precycling behaviour and the intention to participate can be explained by self-efficacy theory (e.g., Bandura, 1977). Precyclers might perceive their efforts as ineffective for environmental protection. Consequently, low environmental self-efficacy could weaken the link between precycling and B.Y.O.C intention (H3a). Additionally, since B.Y.O.C. campaigns may include discounts, the effect of precycling may also be influenced by heightened price consciousness. We hence assume that consumers with strong price consciousness are more likely to respond to discounted prices (Lichtenstein et al., 1993) and thus may translate precycling previous behaviour in B.Y.O.C. intention when a discount is offered (H3b).

Finally, based on theory of planned behaviour (Ajzen, 1991), B.Y.O.C. intentions also foster downstream decision variables such as willingness to pay (WTP). We assume that precyclers may honour a company's B.Y.O.C. option by showing a higher WTP (H4). In preparation for in situ experiments, in which actual behaviour will be observed in addition to intentions, we are testing the framework for its suitability in explaining precycling behaviour drivers.

Results:

An online survey among 205 German consumers (52.7% female) aged 16-78 years (Ø 35.3 years) was conducted. The questionnaire included measures from our framework (Table 2). Applying factor scores from a confirmatory factor analysis confirming reliability and validity of all measures and the indifference price point for WTP, we conduct multivariate regressions. Frugality positively predicts precycling ($\beta = .35$; $p < .001$, H1a confirmed), while convenience was negative ($\beta = -.17$; $p < .01$, H1b confirmed). Further, precycling positively influenced B.Y.O.C. intention ($\beta = .58$; $p < .001$, $R^2 = .37$, H2 confirmed). However, this effect was neither moderated by environmental self-efficacy ($\beta = .06$; n.s., H3a rejected) nor by price consciousness ($\beta = .10$; n.s., H3b rejected). Finally, B.Y.O.C. intention increased WTP ($R^2 = .02$) for the offer ($\beta = .16$; $p < .05$, H4 confirmed). An indirect effect of precycling on WTP was observed (.07; bootstrapped 95% CI [.003, .141]), indicating that B.Y.O.C. intention mediated this relationship. Control variables age, gender, education, and profession had no impact.

Discussion:

This study confirms results from previous research that precycling significantly influences consumers' decisions when evaluating everyday B.Y.O.C. offers. Frugality and convenience can be utilized to predict whether consumers exhibit precycling. When consumers tend to be more frugal, they are more open to precycling, while when they seek convenience, they tend to avoid it. Given that both items for B.Y.O.C. intention are highly correlated, it becomes evident that respondents do not expect a discount for bringing their own container but rather appreciate the provider's proactive and eco-friendly approach, showing a higher WTP. This effect is independent of environmental self-efficacy or price consciousness, suggesting that marketers do not need to account for these traits. Since *environmental self-efficacy is usually based on vicarious experiences, one possible explanation for the result is that B.Y.O.C cannot be observed in the chosen context. Additionally, the applied scale was rather abstract, potentially contributing to this issue. Note also that price consciousness is domain specific, which leads to apparent effects in rather high-involvement situations, which was not the case here. Thus, our findings confirm previous research, without compromising the relevance for the framework.*

Overall, the results of this study indicate that precycling presents an opportunity for suppliers to foster in waste prevention and make use of sustainability by leveraging consumers' precycling tendencies. The findings also reveal that consumers are increasingly aware of waste avoidance, reflected in precycling. Consequently, companies in the packaging and retail sectors should incorporate waste-avoiding behaviours in their business models and decisions. Suppliers could align their offerings with sustainable consumption patterns (e.g., unpackaged goods) to appeal to precyclers as a target group. Since pricing and consumer traits matter at the point of sale, discount retailers, where frugality is the key, should clearly communicate zero-waste efforts. Marketers can leverage B.Y.O.C. and similar initiatives, as precyclers are willing to pay more when products reflect these values. Hence, companies can adopt sufficiency-oriented strategies (avoid convenience-based strategies) that emphasize resource preservation or minimalism over mere convenience.

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Figure 1. Conceptual Framework of precycling behaviour.

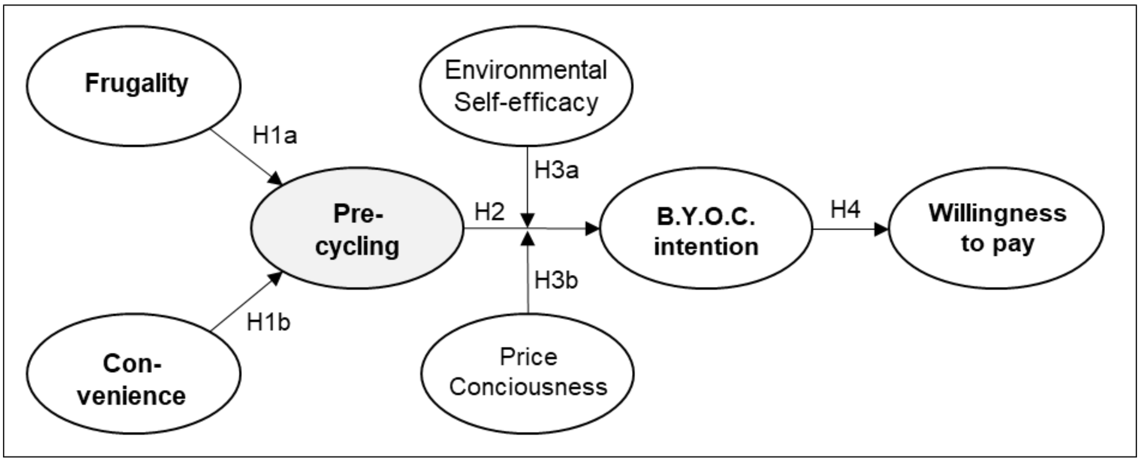

Table 1. Conceptual distinction of precycling behaviour.

	Precycling	**Recycling**	**Upcycling**
Focus	Avoidance of (packaging) waste material	Reusing waste material	Upgrading waste material
Purchase process	Before purchase	After purchase	After purchase
Examples	Buying unpacked fruits and vegetables, bringing own grocery bags, using digital tickets or rechargeable batteries	Reusing shipping boxes or food containers, using old clothes as cleaning rags	Crafting home decorations, furniture, clothes, or accessories
Previous research	e.g., Klug & Niemand, 2021; Lundberg et al., 2024	e.g., Culiberg & Bajde (2013); Ekström & Saloonson (2014); Iyer & Kashyap (2007); Sharp et al. (2010)	e.g., Janigo et al. (2017); Sung et al. (2014); Park (2015); Wilson (2016)

Note. Conceptual distinction in line with Bartl (2004) and Palmer (2009).

Table 2. Questionnaire.

Measurement	FL
Precycling (Klug & Niemand, 2021; α = .80, AVE = .57)	
I consciously buy unpacked products.	.79
I buy sustainably produced products (e.g., food, clothing).	.65
I live the zero-waste approach i.e., I try to avoid (packaging) waste at all.	.83
Compared to others I cause little (packaging) waste.	.67
I strictly reject superfluous (packaging) waste.	.82
Frugality (Sufficiency) (adapted from Lastovicka et al., 1999; α = .76, AVE = .68)	
I discipline myself when shopping to get the most for my money.	.77
I am able to wait to buy something if it will save me money.	.86
To save money for the future, I refrain from buying something today.	.84
Convenience (adapted from Seiders et al., 2007; α = .78, AVE = .69)	
Coffee-To-Go makes coffee consumption easy.	.83
I can buy a Coffee-To-Go quickly.	.81
It doesn't take long to pay for a Coffee-To-Go.	.85
Price Consciousness (adapted from Lichtenstein et al., 1993; α = .83, AVE = .75)	
I purchase from various stores to take advantage of low prices.	.84
The money you save by finding low prices is usually worth the time or effort.	.91
The time it takes to find low prices is usually worth the effort.	.85
Environmental Self-efficacy (adapted from White et al., 2011; α = .84, AVE = .86)	
I believe that I know how to be environmentally friendly.	.93
I believe that I know what actions I will engage in to be environmentally friendly.	.93
B.Y.O.C. Intention (scaled on 0 - 100 %; α = .74, AVE = .80)	
How likely are you to use a reusable cup instead of a disposable cup when you buy a coffee with a €0.25 discount?	.89
How likely are you to use a reusable cup instead of a disposable cup when you buy a coffee without a discount?	.89
Willingness to Pay (Price Sensitivity Meter adapted from van Westendorp, 1976; in €)	
What price for the coffee if you brought your own cup would be…	–
(1)…too expensive?	
(2)…expensive?	
(3)…cheap?	
(4)…too cheap?	

Notes. FL = Factor loadings in constructs. α = Cronbach's alpha. AVE = Average variance explained. The items were re-translated from the questionnaire language (German). Items were responded on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree) if not indicated otherwise. The calculated indifference price point, determined as the balance of responses from options 2 and 3, serves as a measure of willingness to pay. Additionally, the questionnaire contained the covariates age, gender, level of education, and profession.

Methodological Advances for Scaling Responsible Consumption: A Geospatial Visualization of Protein Consumption Patterns in Montreal for Targeted Environmental Interventions

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Introduction:

The urgency of addressing climate change has led to growing interest in the impact of food consumption patterns on greenhouse gas emissions, water use, land degradation, and other environmental consequences. Dietary choices are a focal point of analysis due to their significant environmental impacts. Communication researchers are calling for diversifying environmental interventions, from awareness campaigns to geographically tailored behavioral change interventions (Hine et al., 2014). As such, spatial data on population dietary patterns is key to inform policymakers when designing and implementing such interventions.

The current study provides a comprehensive spatial analysis and data visualization of actual consumption patterns of individuals within the island of Montreal. Specifically, we focus on exploring plant-based protein consumption trends, and we visually inspect the volumes of plant-based shares on the granular neighborhood level, while overlaying them with relevant demographic variables.

The study is innovative in its multi-disciplinary convergence approach as it combines marketing and consumer insights, with geospatial analysis, a discipline that is highly on the rise in leveraging marketing decisions.

Background:

Geospatial Approaches in Marketing & Behavioral Change Research

Geospatial approaches involve ‘the analysis of spatial data to uncover patterns and relationships that are geographically oriented’ (Gupta, 2024). In traditional marketing research, they have long been used for retail store location and targeted design and monitoring of diverse marketing communication strategies. We argue that they can also be profoundly relevant for responsible consumption for both the enterprise and the public policy makers. For the enterprise, they locate where consumers are, their preferences and purchase decisions by location, and how locations differ in terms of presence, composition of competitors, infrastructure, and other contextual characteristics (Wichmann et al., 2023). For the policymakers, these methods can help identify and better target interventions to vulnerable populations, monitor outcomes of both policies adopted in public governance models as well as decisions and actions taken by commercial and social enterprises in a given territory. One of the most prevalent contributions that geospatial analysis brings is geospatial clustering and segmentation, which addresses and resolves the faulty assumption of homogeneity in marketing communication and behavioral interventions (Meyer-Rath et al., 2018). This is particularly relevant in policymaking, given the growing interest in designing unbiased policies that apply principles of equity, justice, and inclusion.

To date, there has been interest in applying geospatial analysis in health intervention research and in commercial marketing research. As for environmental research, geospatial data has been used in tracking baselines, outputs and environmental intervention results over time, specifically in tracking biodiversity and forestry interventions (Anand & Batra, 2021). Environmental *behavioral* interventions have yet to benefit from the strategic contribution that Geospatial Information Systems (GiS) have to offer.

Environmental Justice in Food Policy

The study of plant-based vs. animal based food consumption induces a shallow focus on the environmental dimension, while overlooking other sustainability pillars, which minimizes the overlap between policy goals and builds barriers around the integration of the environmental dimension in policies. Our approach is rooted in environmental justice, a principle that advocates for equal protection of environmental and public health laws and regulations for all people and communities (Mohai et al., 2009). This principle has evolved substantially to become more fluid over time and geography (Agyeman et al., 2016) and to focus on a broad range of environmental issues such as policy planning of desirable communities and equitable access to sustainable opportunities.

We argue that in food policymaking, a rich model accounting for population heterogeneity and including an environmental justice perspective should be favored as it aligns with the food policy landscape, allows for a customized implementation of the policy, increases the chances of environmental knowledge integration in policy, and bolsters policy-compliance behavior.

Method and Analysis:

Data and Data Source

The project involves integrating several data sets, namely the carbon footprint data, the loyalty program data, and the Census data.

- Carbon footprint data: we used two dataset: 1) the SU-Eatable LIFE dataset developed by Petersson et al (2021) presenting global averages of food items' carbon footprints and 2) CIRAIG's LCA data, which is a life cycle inventory database adapted for the Quebec and Canadian context. Both datasets provide carbon emissions in Kg of CO2 equivalent per Kg and are based on rigorous scientific research.

- Loyalty data: Data from a loyalty program of a large retail grocery chain in Quebec, Canada, was obtained. The data consists of transaction data from 300,000 program members across the province of Quebec, but only data for the island of Montreal were used, covering the period between February 1st 2015 and September 30th 2017. Only protein item transactions were included in the analysis. The postal code of loyal customers allowed us to link the dataset to the census data.

- Census data: To explore sociodemographic profiles of neighborhoods, 2016 Canadian Census data, including population size, gender distribution, education level, household size, household income, households with children, and modes of transportation. These were expressed at the level of the neighborhood.

Analysis and Results:

Our analysis comprises two elements: 1) an assessment of the spatial correlation between plant-based protein item shares and demographic variables, and 2) a geospatial visualization of the monthly per capita plant-based volume purchased as well as carbon emissions by borough. These visualizations are then overlayed with demographic variables to inspect variations across boroughs.

Correlation analysis

The table from the Geographically Weighted Beta Regression (GWBR) analysis explores the impact of various demographic factors on the plant-based share of food consumption across different administrative regions of Montreal. The standout finding from our analysis is the significant positive association between higher education levels and plant-based diet adoption. Specifically, regions with a higher percentage of residents holding university-level qualifications show increased plant-based food consumption, a robust result significant at the 0.01 level.

Other demographic factors like the share of men and active commuters, although not statistically significant, provide a useful context for understanding regional dietary patterns. Variables such as household size and median income did not show a significant impact, suggesting that plant-based food consumption might be more closely tied to educational influences rather than economic ones.

Overall, the model's adjusted R^2 of 0.152 indicates that while it captures some variability in diet preferences across Montreal, additional factors likely influence these patterns.

Table 1

GWBR Results with Robust Standard Errors

Predictor	Robust.SE	Min	Max	Mean	t_value	p_value
(Intercept)	0.06	-4.75	-4.40	-4.57	-0.43	0.67
XAverage.household.size	0.02	0.11	0.26	0.19	-0.25	0.80
XShare.of.People.without.an.Official.Language.Mother.Tongue	0.04	-1.31	-0.54	-0.91	-0.19	0.85
XShare.of.Men	0.11	3.47	3.97	3.71	1.86	0.07
XShare.of.Active.Commuters	0.05	-1.40	-0.51	-0.91	0.24	0.81
XShare.of..University.certificate..diploma.or.degree.at.bachelor.level.or.above	0.02	0.88	1.06	0.96	2.97	0.00
XMedian.total.income.of.households.in.2015	0.00	-0.00	-0.00	-0.00	-0.52	0.60

Note. The table reports the GWBR model coefficients with robust standard errors, along with min, max, and mean values of the parameter estimates. Adjusted R^2 = 0.152.

* p < .05, ** p < .01, *** p < .001

Geospatial Analysis

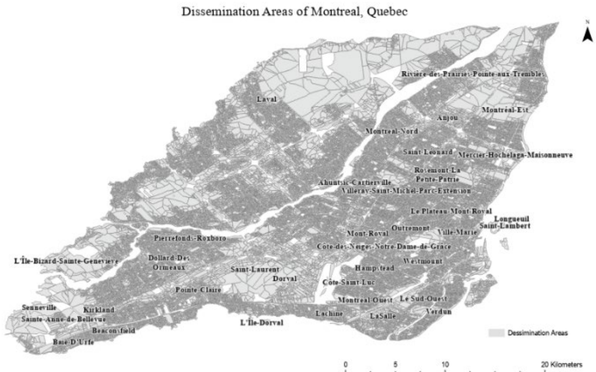


Figure 1. Dissemination Areas of Montreal, Quebec defining 33 neighborhoods for analysis

Using ArcGiS Pro, thematic maps with graduated symbology were created with each dot adjusted to reflect variations in the variable of interest. This method allowed for a clean visual representation of how different demographic factors correlate with carbon emissions from protein consumption in the city.

The analysis revealed distinct patterns in protein consumption across the different neighborhoods. Geocoding and aggregation of neighborhoods resulted in 33 neighborhoods for analysis from the original 110 identified through the card loyalty dataset. The results are shown in Table 2.

Highest CIRAIG total emissions for neighborhoods in the 90th percentile from values 22,0629.233 g - 63,2748.647 g were found in Ahunstic-Cartierville, Rosemont-La Petite-Praire, Cote des Neiges-Notre Dam de Grace, Dorval, and Beaconsfield. Comparably, WorldIn data revealed highest total emissions were found in Mont Royal, Dorval, Ahuntsic-Cartierville, Rosemont–La Petite-Patrie and Beaconsfield. After adjusting for neighborhood population, highest protein volume consumption was found in La Plateau, Côte-des-Neiges–Notre-Dame-de-Grâce, Rosemont–La Petite-Patrie, Mont Royal, Saint Laurent, and Beaconsfield ranging from values 427760.28g to 242659.1.061g. Boroughs with higher shares of Bachelors achieved or above (Table 2), exhibited significantly lower carbon emissions per capita compared to those with lower shares. Similarly, higher shares of households with children and higher income levels had significantly lower carbon emissions. The visualizations of plant based protein consumption indicated areas with higher commute by walking and biking also tended to have higher protein consumption per capita.

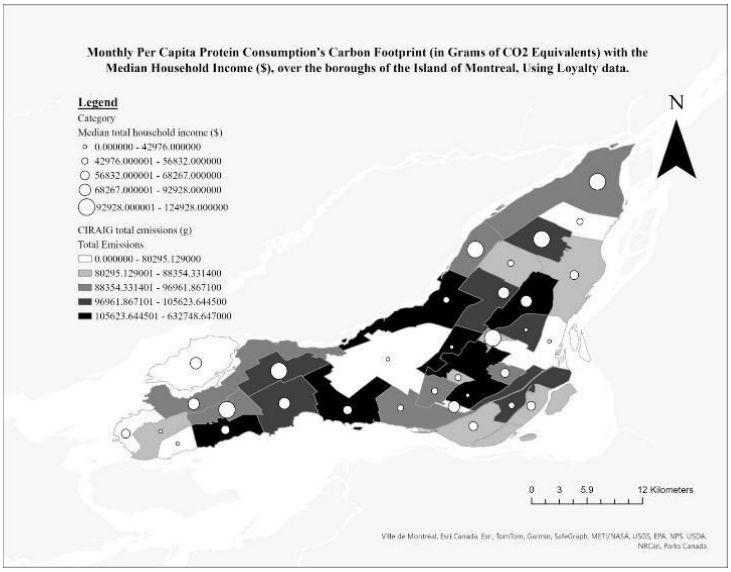


Figure 2. Monthly per capita carbon emissions associated with protein consumption with the median household income ($), over the boroughs of Montreal, Canada

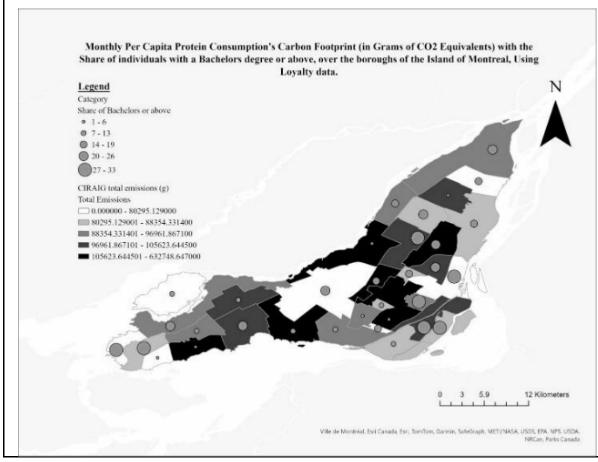
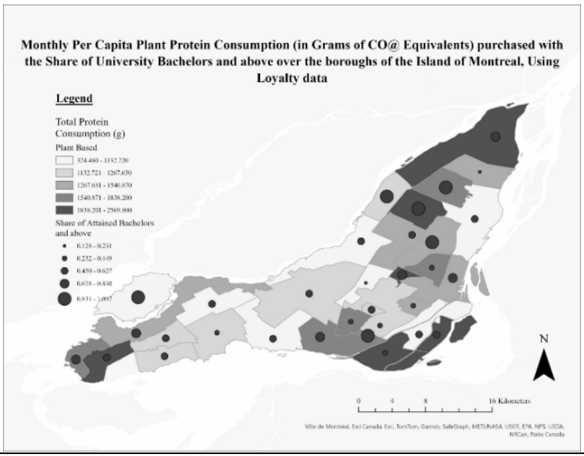
Monthly per capita animal-based protein consumption carbon emissions, overlayed with dots for sociodemographic variables	**Monthly per capita plant-based items purchased, overlayed with dots for specific sociodemographic variables**
	

Table 2. Visualizing carbon emissions and protein volumes against levels of education in Montreal, Canada

Clustering

Hotspots were identified using Getis Ord Gi*. Neighborhoods with statistically significant clusters of purchasing patterns for both plant and animal protein are shown in bright red with a high confidence level of 99%. Two consecutive years, 2015 and 2016, were analyzed allowing for interpretation of temporal and regional patterns of consumption. Eight hotspot maps were created to map the total volume per capita consumed of animal and plant protein, as well as the percentage of animal protein or plant protein of total consumption at the neighborhood level. By normalizing the given data, percentage of animal protein (Figure 2) and percentage of plant protein (Figure 3) yielded more statistically significant results than total volume per capita consumed, revealing total volume per capita might be skewed due to outliers or differences in consumer density.

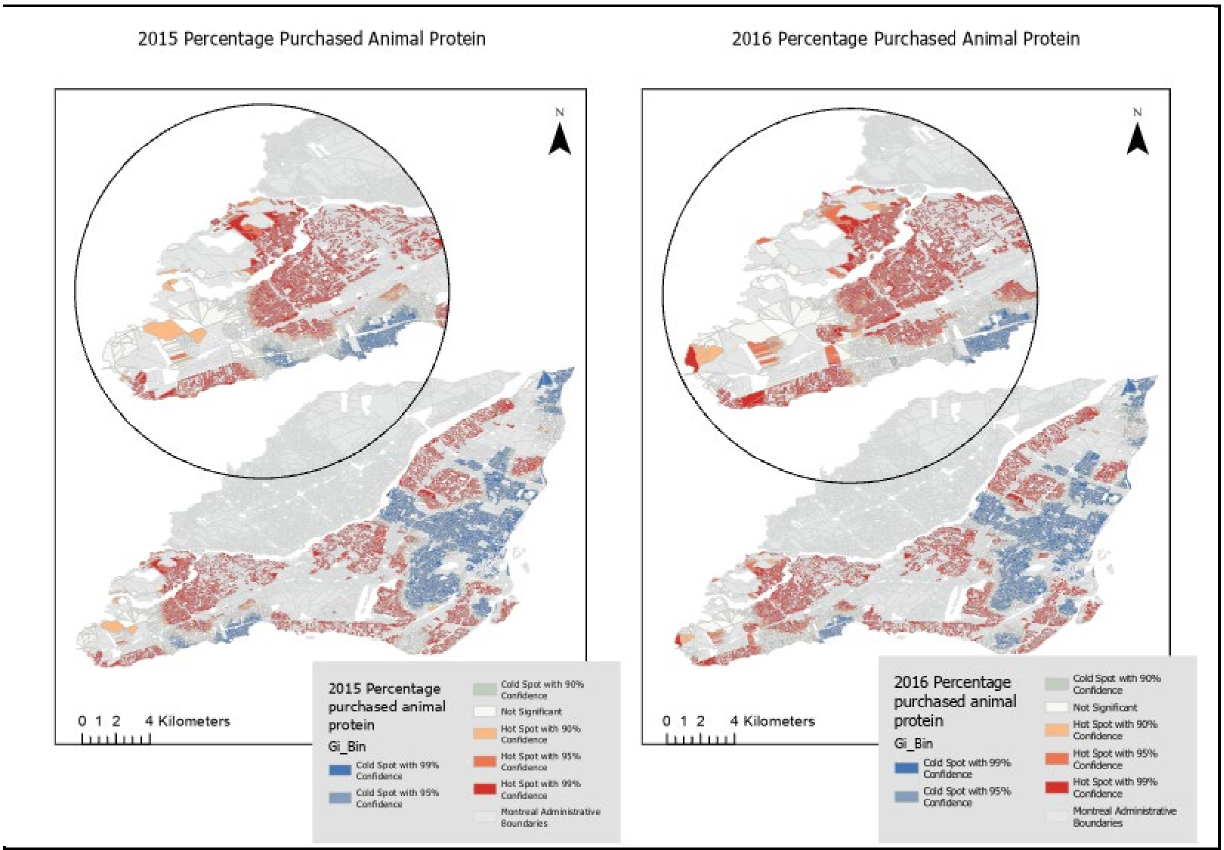


Figure 3. Percentage purchased of Animal Protein in Montreal, Canada from 2015-2016

Percentage purchased of animal protein in 2016 (Figure 3) shows uneven distribution patterns of consumption. Cold spots were concentrated on the east end of the island while hotspots centred the west end and northern edge. Hotspots are located in Risire de Praires, Montreal Nord, Saint Leonard, Saint Laurent, Mont Royal, Ahustic Cartierville, Pierrefonds Roxboro, Dollard des Ormeaux, Kirkland, Baie D’urfe, and Beaconsfield. Some hotspots were notably surrounded by coldspots such as in Point Claire and in Verdun which is also surrounded by significantly high cold spots in Le Sud Ouest. Percentage purchased animal protein in 2015 showed cold spots concentrated in the core urban areas and cover the top north of the island. Hotspots were found in the bottom west end of the island and some were surrounded by cold spots as shown by Mercier-Hoshelaga. Hotspots were found in Riviere des Praires, Montreal Nord, Saint Leonard, Saint Laurent, Mont Royal, Pierre Roxboro, Cote Saint Luc, Montreal Ouest, Lachine, L’ile Dorval, and Ahustic Cartierville.

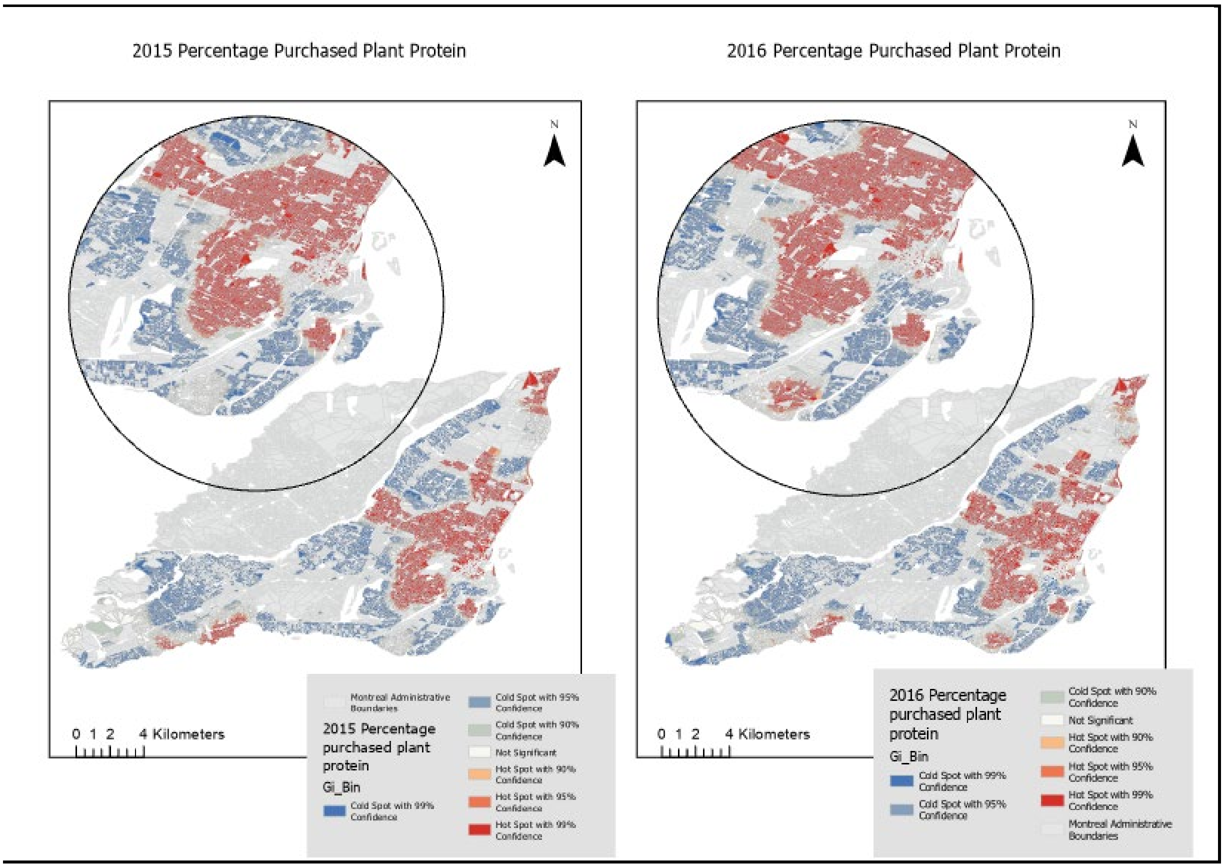


Figure 4. Percentage purchased of Plant Protein in Montreal, Canada from 2015-2016

Percentage Plant protein 2016 showed uneven distribution patterns of clusters across the island. Concentrations of hot clusters in urbanized neighborhoods were seen while suburban neighborhoods had lower, more dispersed clusters. Clusters were concentrated in the central and eastern parts of the island. Hotspots were found in the Plateau-Mont Royal, Point Claire, Beaconsfield, La Salle, Verdun, Hampstead, Cote-de-Niege-Dame de Grace, Outremont, Mercier Hoshelaga-Maissoneave, Rosemont, Villeray-Saint Michel. Hotspots were concentrated around highly populated areas noting that the surrounding of these hotspots were highly significant coldspots. Percentage purchase of plant protein 2015 (Figure 4) shows Cold spots concentrated in the core urban areas and covers the top north of the island. Hotspots were found in the bottom west end of the island. Coldspots were surrounded by hot spots as shown again by Mercier-Hoshelaga. Verdun cold spot is also surrounded by a hot spot in Le Sud Ouest. Coldspots were found in Riviere des Prairies, Montreal Nord, Saint Leonard, Saint Laurent, Mont Royal, Pierre Roxboro, Cote Saint Luc, Montreal Ouest, Lachine, L'ile Dorval, and Ahustic Cartierville.

Discussion and conclusion:

Consumption-based emissions analysis allows the visualization of household activities, contributing to the creation of a spatial carbon inventory crucial for municipal intervention. Unlike previous studies that primarily focused on country-wide consumption data, our individual-level to neighborhood-level analysis provided a more comprehensive view on how community characteristics and distribution might influence dietary choices, and thus carbon emissions. Our study is innovative in the methodology used, and advances the convergence of disciplines towards empowering decision makers with the right data and relevant tools to move forward towards a holistic socio-ecological transition.

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Appendix:

Table 1: Moran's I Results for Spatial Autocorrelation

Variable	Observed_Moran_I	Expected_Moran_I	P_Value	Significance
Median.value.of.dwellings	0.00373751	-0.009174312	0.247106877575922645	
Average.household.size	0.21649487	-0.009174312	0.000000000000000000	***
Share.of.One.Family.Homes	0.21455972	-0.009174312	0.000000000000000000	***
Share.of.Homes.with.Children	0.17013140	-0.009174312	0.000000000000000000	***
Share.of.Multiple.Family.Homes	0.15504746	-0.009174312	0.000000000000000000	***
Share.of.One.Person.Homes	0.20413933	-0.009174312	0.000000000000000000	***
Share.of.Homes.Owned	0.13857663	-0.009174312	0.000000000000000000	***
Share.of.People.with.an.Official.Language.Mother.Tongue	0.10216998	-0.009174312	0.000000000000000000	***
Share.of.People.with.English.Mother.Tongue.	0.29960214	-0.009174312	0.000000000000000000	***
Share.of.People.with.French.Mother.Tongue	0.23008361	-0.009174312	0.000000000000000000	***
Share.of.People.without.an.Official.Language.Mother.Tongue	0.09597770	-0.009174312	0.000000000000000000	***
Share.of.Population.Married	0.15105679	-0.009174312	0.000000000000000000	***
Share.of.Men	0.12169909	-0.009174312	0.000000000000000000	***
Median.total.income.of.households.in.2015	0.10767982	-0.009174312	0.000000000000000000	***
Share.of.Commuters.Driving.Car	0.24797282	-0.009174312	0.000000000000000000	***
Share.of.People.Riding.in.a.Car	0.15504103	-0.009174312	0.000000000000000000	***
Share.of.Public.Transport	0.16222447	-0.009174312	0.000000000000000000	***
Share.of.Bikers	0.18773166	-0.009174312	0.000000000000000000	***
Share.of.Walkers	0.21258035	-0.009174312	0.000000000000000000	***
Population.Density	0.09447427	-0.009174312	0.000000000000000000	***
Pop16_MPC	0.06759724	-0.009174312	0.000000000007639445	***
Other.Transportation.Methods	0.01660137	-0.009174312	0.024214541177785875	*
Bottom.Decile.of.Income	0.11757817	-0.009174312	0.000000000000000000	***
Share.of..No.certificate..diploma.or.degree	0.11468652	-0.009174312	0.000000000000000000	***

Is Ø More Sustainable than O? The Scandinavian = Sustainable Intuition

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Keywords: intuition, Scandinavia, sustainability, implicit association test, product perception

Introduction:

In a society where environmental awareness is rising, the question of a product's sustainability is becoming increasingly important for concerned consumers (Haws et al., 2014). Marketers communicate these aspects explicitly to consumers. Also, it appears that communicating product sustainability can be implied subtly. Some brands even try to imply sustainability in their brand name. We posit that an implicit link between sustainability and Scandinavian attributes becomes relevant. For example, brands such as Søstrene Grene or Røde incorporate the Scandinavian letter Ø in their names, arguably to catch the consumer's eye for two reasons — first, the foreignness of the brand name. Letters such as Å, Ø and Æ only occur in Scandinavian languages and can therefore visualize an indicator of origin (Lindqvist, 2012). Second, they may evoke and transfer associations one has with Scandinavian country images. Among these, Scandinavia represents a unique blend of natural landscapes, high environmental protection, and sustainable development (Helliwell et al., 2025), which is for instance indicated by high scores in SDG ranking (Sachs et al., 2024). Scandinavian countries are often considered sustainable. With these associations in mind, some brands arguably use letters to imply sustainability. This article focuses on the visual and symbolic impact of foreign letters in brand names, differing from studies like Joshi and Kronrod (2020) that concentrate on the sound of brand names. In the sense of anti-consumption, brands indicating sustainability may be perceived exploitative (Makri et al., 2020). However, our assumption requires a consumer‘s lay theory that typical Scandinavian attributes are associated with sustainability. In this research, we examine whether such a Scandinavian = sustainable intuition (SSI) can be found implicitly and explicitly. Further, we investigate the intuitions' impact on downstream variables.

Conceptual Framework:

In recent years, researchers have focused on analyzing consumer lay theories (Raghunathan et al., 2006; Luchs et al., 2010; Disselhoff et al., 2025), commonly differentiated into the implicit intuition itself and the explicit belief in this intuition (Mai et al., 2019). In a macro-perspective, the connection between Scandinavia and sustainability may be attributed to the three dimensions of sustainability (Elkington, 1997). This can lead to a carryover among consumers who connect the sustainable image of Scandinavian countries with brands that are identified as Scandinavian. We investigate whether such an SSI exists implicitly in consumers. According to Kahneman (2003), the retrieval of information from the associative network occurs unconsciously in System 1. Consequently, consumers are unaware of the linkage between Scandinavia with sustainability and thus would not be able to articulate this linkage. To investigate the implicit, we use the Implicit Association Test (Greenwald et al., 1998) as a quantitative measure of reaction times via predefined categorization tasks. Also, we explore whether the SSI occurs explicitly, representing the conscious component for consumers, i.e., the belief that the consumers are aware of and articulate the SSI.

Brands use letters adopted from Scandinavian languages to evoke desired brand associations. We follow this approach and embed foreign letters in our theorizing: a brand can use such a letter within a Scandinavian name, opt for the Scandinavian name without foreign letters or use a non-Scandinavian brand name. Consistent with SSI, we posit that brand name itself does not affect downstream variables (H_1). Yet, we assume that having a strengthened SSI is consistent with the desired brand associations conveyed by a Scandinavian brand name, even more so with foreign letters. Hence, implicit and explicit SSI arguably serve a moderator role, not a direct effect on downstream variables (H_2, H_3).
Moreover, intuitions could be seen as a cognitive shortcut when information for a correct conclusion on product characteristics is lacking (Broniarczyk & Alba, 1994). Thereby, the available product information is used to draw heuristics about unavailable product features (Mai et al., 2019). We therefore assume that products with a Scandinavian brand name containing foreign letters foster perceived sustainability if the implicit SSI is strong (H_4), as consumers implicitly project the sustainability associated with Scandinavia onto the brand including foreign letters more strongly than without it. Likewise, a strong explicit SSI combined with a Scandinavian brand containing foreign letters increases perceived sustainability (H_6). For reasons of brevity, we refer to Table 1 for hypotheses. To test our framework, we combined Implicit Association Test (IAT, Greenwald et al., 1998) and a 3x0 between-subjects experiment (Scandinavian brand name with foreign letters vs. Scandinavian brand name without foreign letters vs. German brand name).

Table 1. Hypotheses

#	Hypothesis
H_1 a/b/c/d	*The brand has no influence on a) the willingness-to-pay, b) the word-of-mouth, c) the purchase intention, and d) the perceived sustainability.*
H_2 a/b/c/d	*The implicit SSI has no influence on a) the willingness-to-pay, b) the word-of-mouth, c) the purchase intention, and d) the perceived sustainability.*
H_3 a/b/c/d	*The explicit SSI has no influence on a) the willingness-to-pay, b) the word-of-mouth, c) the purchase intention, and d) the perceived sustainability.*
H_4 a/b/c/d	*The higher the implicit SSI, the more positive the influence of the Scandinavian brand with foreign letters on a) the willingness-to-pay, b) the word-of-mouth, c) the purchase intention, and d) the perceived sustainability.*
H_5 a/b/c/d	*The higher the implicit SSI, the more positive the influence of the Scandinavian brand without foreign letters on a) the willingness-to-pay, b) the word-of-mouth, c) the purchase intention, and d) the perceived sustainability.*
H_6 a/b/c/d	*The higher the explicit SSI, the more positive the influence of the Scandinavian brand with foreign letters on a) the willingness-to-pay, b) the word-of-mouth, c) the purchase intention, and d) the perceived sustainability.*
H_7 a/b/c/d	*The higher the explicit SSI, the more positive the influence of the Scandinavian brand without foreign letters on a) the willingness-to-pay, b) the word-of-mouth, c) the purchase intention, and d) the perceived sustainability.*

Result Summary & Discussion:

In our experiment, we have been able to show that the SSI exists both implicitly and explicitly. We identified that a Scandinavian brand containing foreign letters is perceived more sustainable due to the moderating effect of explicit SSI (Figure 1). In addition, the explicit SSI moderates the effect of a Scandinavian brand without foreign letters on word-of-mouth (Figure 2). We also found a mediating effect of perceived sustainability between explicit SSI and word-of-mouth (Figure 3). Since we could not find interaction effects with the implicit SSI, we assume that it has no unconscious decision relevance. This is good news from an anti-consumption perspective. Consumers seem aware of their SSI and hence can punish/reward an exploitative/truthful use.

Our findings advance the understanding of consumer behavior regarding lay theories in three ways. First, we were able to identify and explore another consumption-related intuition. Second, we found that consumers must have explicitly elaborated the intuition to guide downstream variables. Third, we reveal that the implicit SSI does elicit an effect. This establishes that SSI might not consist of two components of a single entity. Instead, implicit and explicit elements arguably represent two distinct entities.

Marketers cannot expect to benefit from using Scandinavian brand names per se. Instead, they consider that consumers require an elaborated belief in the SSI. This necessitates that Scandinavian brand names use foreign letters to guide perceived sustainability. Moreover, consumers use brand products with which they identify for self-expression (Fournier, 1998). It is therefore recommended that brands engage with target groups to understand whether the products benefit from the perception of sustainability.

Figure 1. Confidence intervals for the interaction effect of Brand and Explicit SSI on Sustainability

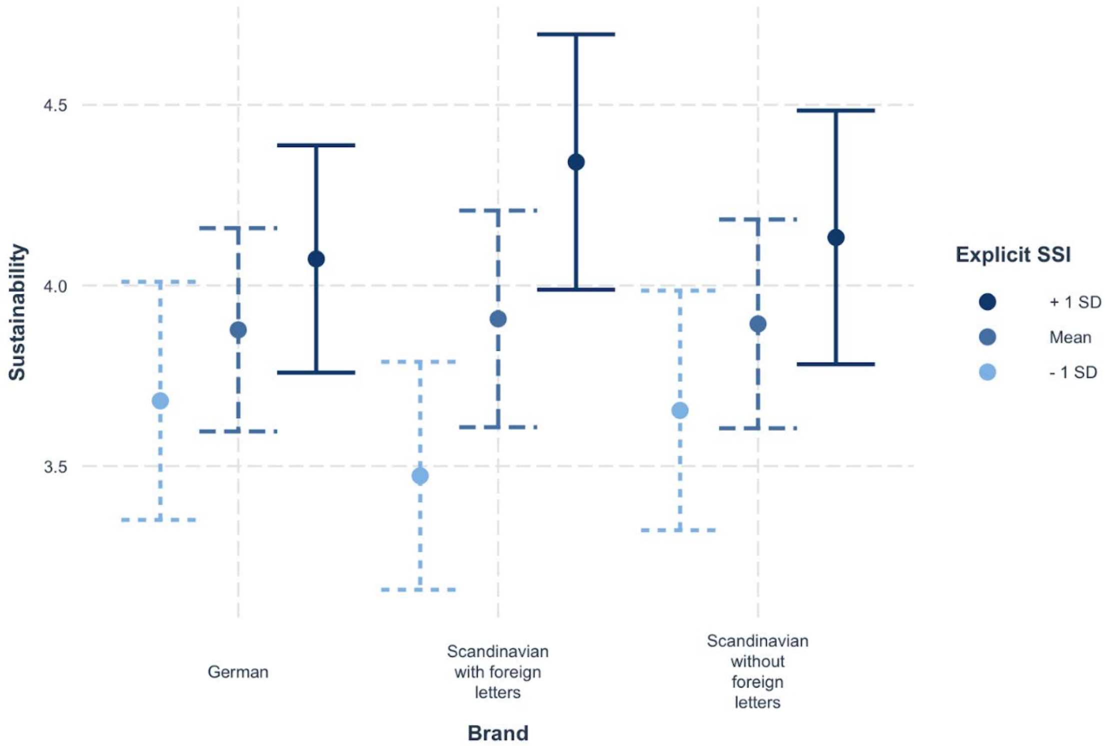


Figure 2. Confidence intervals for the interaction effect of Brand and Explicit SSI on Word-of-Mouth

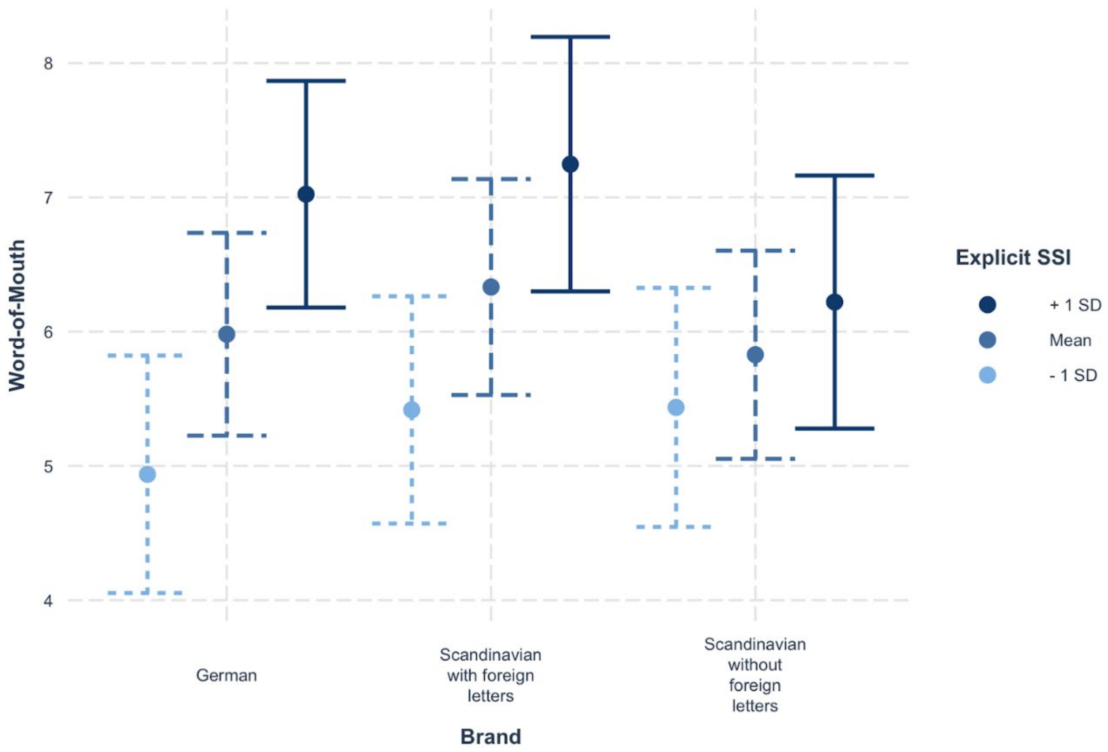
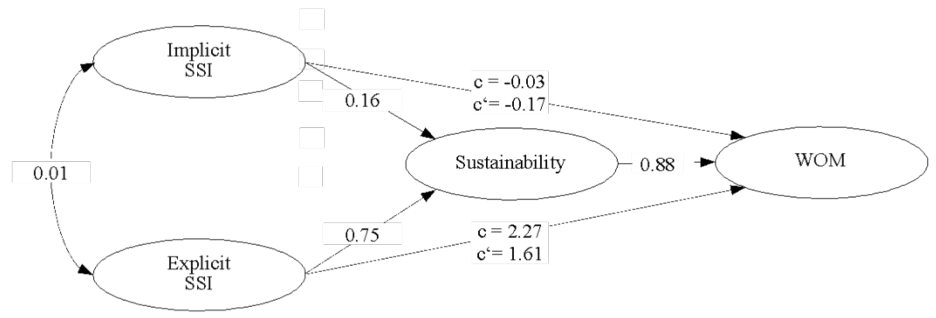


Figure 3. Mediating Effect of Sustainability between Explicit SSI and WOM



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Are We Becoming More Responsible Tourists? Tracking Segments and Trends Over Time

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Introduction:

The tourism industry is one of the most dynamic economic sectors globally, but it also causes significant negative environmental impacts (Holden, 2016; Tehseen et al., 2024). Transitioning to more responsible tourism (RT) has become essential. This shift requires tourists to adopt concrete individual behaviors that reflect the values of sustainable tourism (Dhama & Anil, 2025; Mihalic, 2016).

Although environmental concerns have become more prominent among many tourism industry stakeholders, tourists' adoption of more responsible behaviors remains highly inconsistent (e.g. Adam et al., 2021; Agyeiwaah & Bangwayo-Skeete, 2024) and our understanding of the different behavioral profiles of tourists remains limited.

Research objectives:

This study advances RT behaviors research through three distinct objectives.

1. **To identify latent segments of travelers based on their RT behaviors.** While environmentally friendly tourists (EFT) research often centers on low-impact ecotourism (Dolnicar et al., 2008), this study expands the lens to RT across varied contexts, using personal characteristics for refined segmentation. Prior studies rely on variable-centered or aggregated behavior scores (e.g. Dolnicar, 2010; Gao et al., 2017; Mathew & Sreejesh, 2017), or isolate single behaviors (e.g. Noor & Kumar, 2014), overlooking the diversity of behavioral combinations. We adopt a person-centered approach—Latent Class Analysis (LCA)—to uncover tourists with similar behaviors (Weller et al., 2020), a method still underused in RT research (Agyeiwaah & Bangwayo-Skeete, 2024).

2. **To analyze how these segments evolve over time**. Existing studies lack data that capture long-term pattens or changes in RT behaviors changes over time (Hall et al., 2016; Xu et al., 2020). To overcome the static view of responsible tourism in cross-

sectional studies, this research uses a repeated cross-sectional design (2021–2024) to track behavioral trends and assess their sustainability.

3. **To identify the sociodemographic characteristics associated with each profile.** This study explores the sociodemographic traits associated with RT behaviors profiles, addressing the fragmented and inconclusive findings of prior research (Dolnicar, 2010; Tasci et al., 2022).

Literature review:

Using Biddle (1986)'s role theory, this study links sociodemographic traits and social roles to environmentally conscious consumer behaviors, offering insights into evolving tourist segments. Individual actions reflecting environmental concern, as outlined by the Center for Responsible Travel (2021), serve as indicators for segment identification.

This study examines four practices across the travel cycle, namely 1) **trip frequency reduction** (planning and decision-making), 2) **modal shift in transportation** (journey itself), 3) **voluntary carbon offsetting (VCO)** (post-decision accountability), and 4) **sustainable choices in accommodation or attractions** (on-site experience). This approach enables segmentation beyond attitudes or intentions.

Method:

The study participants were recruited each fall from 2021 to 2024 (Table 1) through a Léger Opinion (2024) online panel. Survey eligibility required respondents to meet specific criteria: Eligible respondents were French-speaking Quebec residents aged 18+, panel members who consented and had spent at least one night away for leisure travel in the past two years. A nonprobability quota sampling strategy ensured balanced representation of Quebec's population by gender, age, and residence. Six sociodemographic variables were used to characterize each RT profile (Table 2). Respondents reported whether they engaged on not in four environmentally motivated tourism behaviors (Table 3).

Table 1. Data Collection Timeline and Sample Size.

Year	Data Collection Dates	Sample Size (N)
2021	December 1–6, 2021	1206
2022	November 21–25, 2022	1007
2023	October 30 – November 6, 2023	1051
2024	November 4–15, 2024	975

Table 2. Sample Composition by Key Demographics.

		2021 n(%)	2022 n(%)	2023 n(%)	2024 n(%)
Gender	Female	637(52.9)	476(47.3)	554(52.8)	495(50.9)
	Male	567(47.1)	531(52.7)	496(47.2)	478(49.1)
Age	18-24	120(10,0)	120(11.9)	101(9.6)	95(9.7)
	25-34	307(25.5)	198(19.7)	210(20.0)	200(20.5)
	35-44	207(17.2)	198(19.7)	197(18.7)	165(16.9)
	45-54	203(16.8)	133(13.2)	176(16.7)	137(14.1)
	55-64	202(16.7)	144(14.3)	232(22.1)	192(19.7)
	65-74	167(13.8)	214(21.3)	135(12.8)	186(19.1)
Household composition	Single person	339(28.6)	266(26.8)	193(19.8)	194(21.1)
	Couple (children at home)	304(25.7)	241(24.2)	321(33.0)	281(30.5)
	Couple (no children at home)	471(39.8)	426(42.9)	415(42.7)	401(43.5)
	Single-parent family	70(5.9)	61(6.1)	44(4.5)	45(4.9)
Education level	None/Primary	4(0.3)	3(0.3)	7(0.7)	2(0.2)
	Secondary or vocational	231(19.2)	203(20.2)	211(20.2)	216(22.2)
	College/CEGEP/technical	399(33.1)	361(35.9)	362(34.6)	350(35.9)
	University	570(47.3)	439(43.6)	467(44.6)	406(41.7)
Employment status	Worker	799(66.7)	605(60.4)	713(68.5)	622(64.4)
	Student	99(8.3)	100(10.0)	74(7.1)	67(6.9)
	Non-Worker	300(25.0)	297(29.6)	254(24.4)	277(28.7)
Income (CA$)	Less than 39,999	132(12.0)	102(11.1)	97(10.1)	92(10.2)
	40,000 to 59,999	194(17.6)	138(15.0)	150(15.6)	125(13.9)
	60,000 to 79,999	166(15.1)	159(17.3)	138(14.4)	139(15.4)
	80,000 to 99,999	179(16.2)	146(15.9)	139(14.5)	134(14.9)
	100,000 to 119,999	162(14.7)	152(16.6)	125(13.0)	100(11.1)
	120,000 to 149,999	128(11.6)	110(12.0)	131(13.6)	120(13.3)
	150,000 and over	141(12.8)	110(12.0)	181(18.8)	190(21.1)

Table 3. Operationalization of Study Variables and Descriptive Results.

For environmental reasons, have you…	Label		2021 n(%)	2022 n(%)	2023 n(%)	2024 n(%)
…voluntarily limited the number of trips (or tourist travels) per year?	*TripReduce*	**Yes**	311(25.8)	306(30.4)	203(19.3)	196(20.1)
		No	895(74.2)	701(69.6)	848(80.7)	779(79.9)
…voluntarily replaced air travel with another mode of transport (e.g., train, bus, car) for the same trip?	*ShiftTransp*	**Yes**	291(24.1)	210(20.9)	217(20.6)	168(17.2)
		No	915(75.9)	797(79.1)	834(79.4)	807(82.8)
…paid to offset greenhouse gas emissions from your travel?	*VCO*	**Yes**	142(11.8)	103(10.2)	123(11.7)	117(12.0)
		No	1064(88.2)	904(89.8)	928(88.3)	858(88.0)
…chose accommodation or an attraction because of its sustainable or responsible orientation?	*SustChoice*	**Yes**	299(24.8)	224(22.2)	253(24.1)	215(22.1)
		No	907(75.2)	783(77.8)	798(75.9)	760(77.9)

Note. The wording of the items was translated from French to English for clarity and accessibility.

Results:

LCA using Mplus V8 identified yearly RT behavior profiles (objective 1) and tracked trends over time (objective 2), while Chi-square tests examined sociodemographic differences across profiles (objective 3).

Objective 1. Model fit indices (Nylund et al., 2007) identified three consistent RT behaviors profiles annually (Table 4).

Table 4. Summary of Fit Indices for One- to Six-Class Models (2021-2024).

	No. of profiles	LL	AIC	BIC	SSABIC	Entropy	BLRT (*p*-value)	Smallest profiles %
2021	1	-2467.289	4942.577	4962.957	4950.252	-	-	-
	2	-2251.241	4520.483	4566.338	4537.751	0.629	<0.001	26.45
	3	**-2236.410**	**4500.821**	**4572.152**	**4527.682**	**0.726**	**<0.001**	**3.57**
	4	-2235.078	4508.156	4604.963	4544.611	0.624	0.6667	3.57
	5	-2234.927	4517.853	4640.135	4563.902	0.719	1.0000	0.0
	6	-2234.927	4527.853	4675.610	4583.495	0.666	1.0000	1.58
2022	1	-2000.085	4008.170	4027.828	4015.124	-	-	-
	2	-1778.517	3575.034	3619.267	3590.682	0.696	<0.001	25.32
	3	**-1772.951**	**3573.901**	**3642.707**	**3598.242**	**0.668**	**0.0300**	**10.23**
	4	-1771.869	3581.737	3675.117	3614.772	0.654	0.5000	3.08
	5	-1771.869	3591.737	3709.691	3633.465	0.614	1.0000	0.99
	6	-1771.869	3601.737	3744.265	3652.159	0.558	1.0000	2.78
2023	1	-2010.437	4028.873	4048.703	4035.999	-	-	-
	2	-1832.540	3683.079	3727.697	3699.111	0.653	<0.001	22.46
	3	**-1823.825**	**3675.649**	**3745.054**	**3700.588**	**0.688**	**<0.001**	**6.47**
	4	-1815.107	3668.215	3762.407	3702.060	0.721	<0.001	2.57
	5	-1814.799	3677.599	3796.579	3720.351	0.756	1.0000	2.74
	6	-1814.799	3687.599	3831.366	3739.258	0.715	1.0000	0.0
2024	1	-1809.433	3626.866	3646.396	3633.692	-	-	-
	2	-1629.789	3277.578	3321.520	3292.936	0.668	<0.001	25.03
	3	**-1624.685**	**3277.370**	**3345.725**	**3301.260**	**0.665**	**0.0500**	**13.64**
	4	-1623.986	3285.972	3378.738	3318.394	0.716	1.0000	6.56
	5	-1623.986	3295.972	3413.150	3336.926	0.716	1.0000	5.13
	6	-1623.986	3305.972	3447.562	3355.458	0.668	1.0000	2.67

Note. Bold entries reflect the selected model. LL, log-likelihood; AIC, Akaike information criterion; BIC, Bayesian information criterion; SSABIC, sample-size-adjusted BIC; BLRT, bootstrap likelihood ratio test.

Table 5 and Figure 1 present profiles probabilities for each year in the three-class model. Table 6 describes the behavioral profiles.

Table 5. Predicted Latent Class Probabilities.

Class	Year	Profile distribution by year (%)	*TripReduce* Yes	*TripReduce* No	*ShiftTransp* Yes	*ShiftTransp* No	*VCO* Yes	*VCO* No	*SustChoice* Yes	*SustChoice* No
Non-adopters (Profile 1)	2021	53.3	0.02	**0.98**	0.00	**1.00**	0.01	**0.99**	0.00	**1.00**
	2022	55.6	0.01	**0.99**	0.00	**1.00**	0.01	**0.99**	0.02	**0.98**
	2023	57.7	0.00	**1.00**	0.00	**1.00**	0.01	**0.99**	0.04	**0.96**
	2024	69.9	0.00	**1.00**	0.03	**0.97**	0.04	**0.96**	0.06	**0.94**
Pivotal adopters (Profile 2)	2021	43.1	0.43	**0.57**	0.41	**0.59**	0.17	**0.83**	0.42	**0.58**
	2022	34.2	**0.55**	0.45	0.33	**0.67**	0.14	**0.86**	0.31	**0.69**
	2023	35.8	0.34	**0.66**	0.37	**0.63**	0.20	**0.80**	0.41	**0.59**
	2024	16.5	**0.66**	0.34	0.38	**0.62**	0.09	**0.91**	0.34	**0.66**
Committed adopters (Profile 3)	2021	3.6	**0.98**	0.02	**1.00**	0.00	**0.81**	0.19	**1.00**	0.00
	2022	10.2	**0.82**	0.18	**0.80**	0.20	0.49	**0.51**	**1.00**	0.00
	2023	6.5	**1.00**	0.00	**1.00**	0.00	**0.51**	0.49	**1.00**	0.00
	2024	13.6	0.49	**0.51**	**0.54**	0.46	**0.51**	0.49	**0.79**	0.21

Note. Conditional probability values greater than chance (i.e. above 0.50) are bolded.

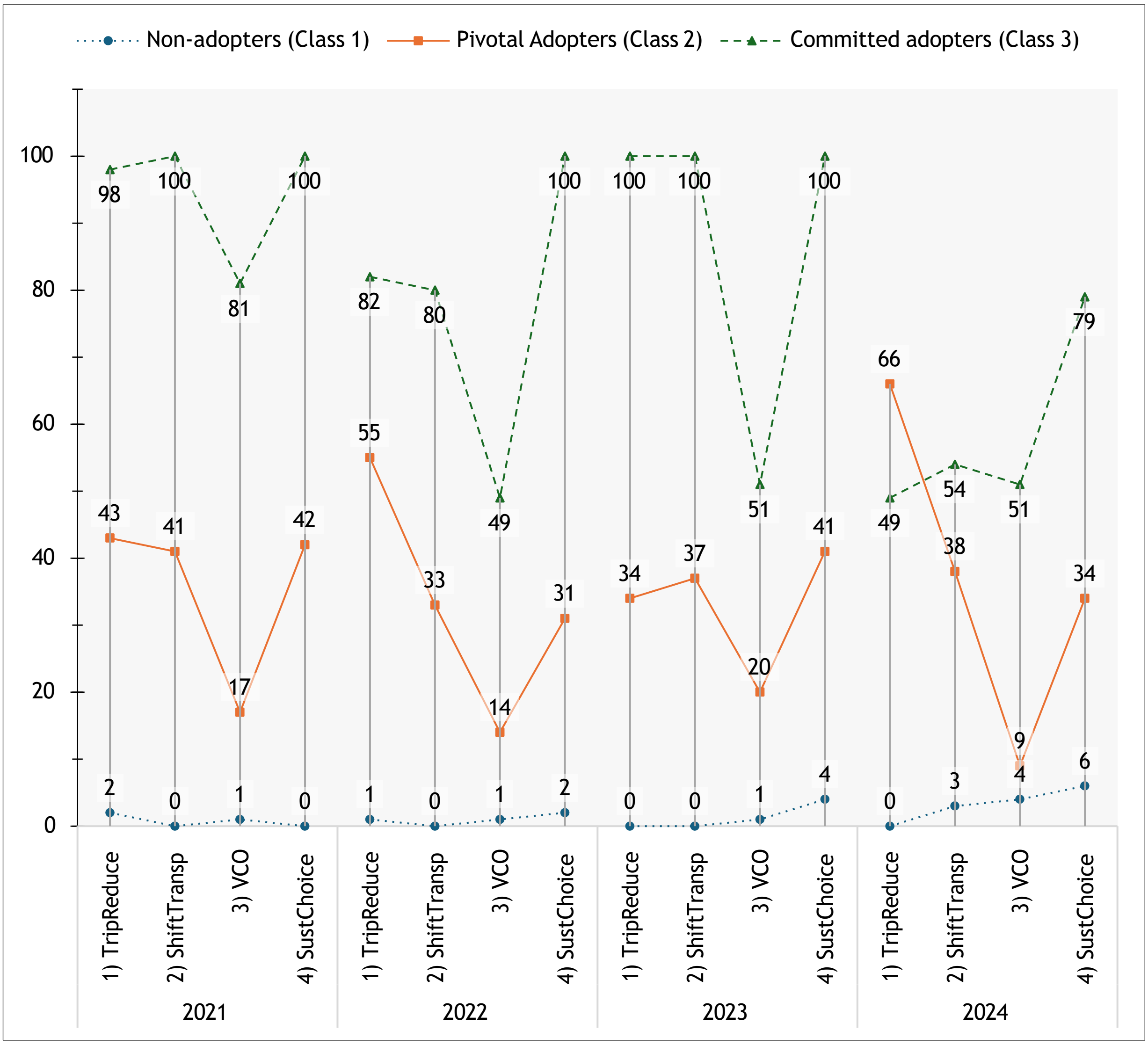


Figure 1. Predicted Latent Class Probabilities (%).

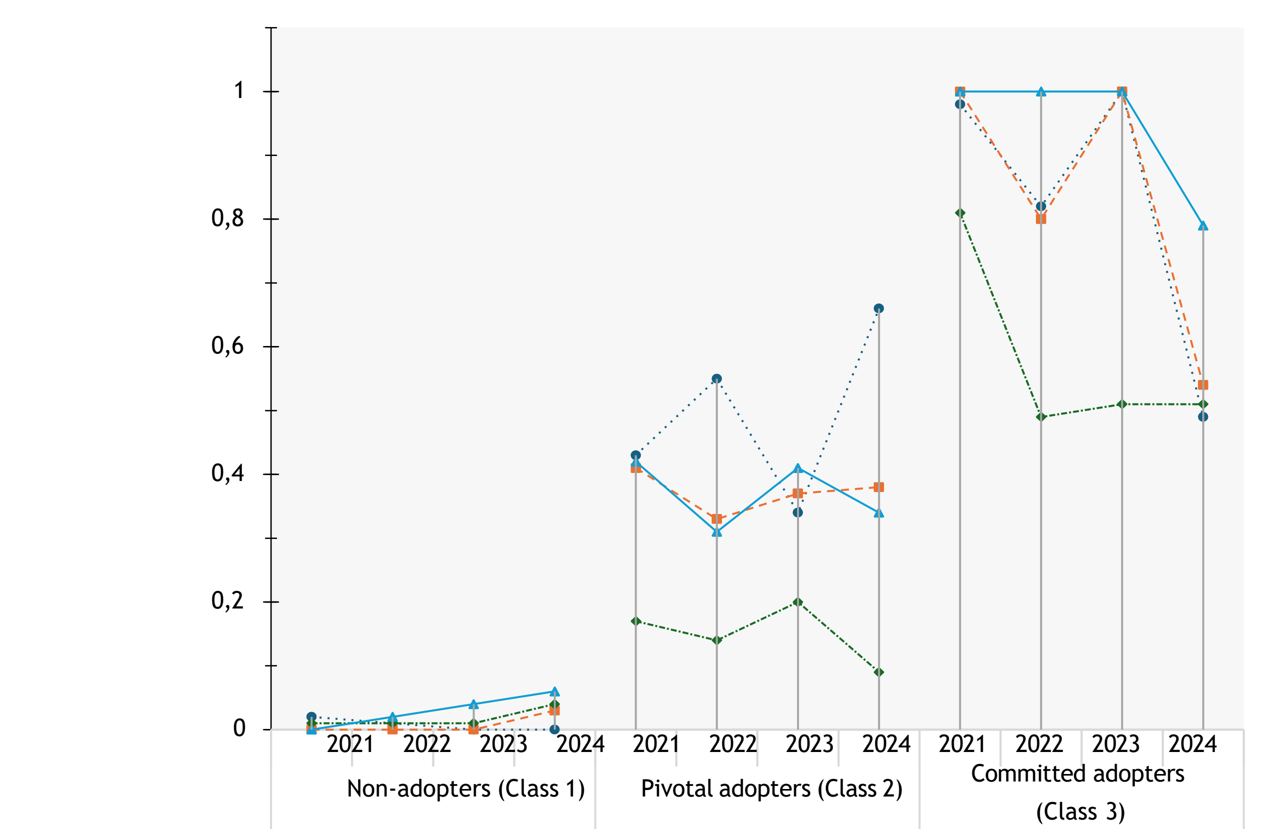
Table 6. Behaviors Profiles

Profile	Behavioral Characteristics
Non-adopters (Profile 1)	Near-zero adoption of RT; growing segment suggests overall decline in RT.
Pivotal adopters (Profile 2)	Moderate, selective engagement; low interest in carbon offsetting; declining share over time.
Committed adopters (Profile 3)	High RT engagement overall, but lower adoption in 2024 suggests weakening commitment.

Objective 2. The composition of adoption profiles shifted significantly over time (Table 7), with a marked movement away from pivotal adoption toward non-adoption, while committed adoption gained a smaller but growing share. Despite the increase in the proportion of individuals belonging to the Committed adopters profile, their probabilities of engaging in RT behaviors have decreased across all indicators.

Table 7. Comparison of the percentage distribution of each profile across years and test of significant differences

Years	Non-adopters (Profile 1) %	Pivotal Adopters (Profile 2) %	Committed adopters (Profile 3) %	Chi-square *p*-value
2021	53.3	43.1	3.6	
2022	55.6	34.2	10.2	$X^2(6,4239) =$ 224.563, p<.001 Cramer's V = 0.163
2023	57.7	35.8	6.5	
2024	69.9	16.5	13.6	



	Non-adopters (Class 1) 2021	2022	2023	2024	Pivotal adopters (Class 2) 2021	2022	2023	2024	Committed adopters (Class 3) 2021	2022	2023	2024
TripReduce	0,02	0,01	0	0	0,43	0,55	0,34	0,66	0,98	0,82	1	0,49
ShiftTransp	0	0	0	0,03	0,41	0,33	0,37	0,38	1	0,8	1	0,54
VCO	0,01	0,01	0,01	0,04	0,17	0,14	0,2	0,09	0,81	0,49	0,51	0,51
SustChoice	0	0,02	0,04	0,06	0,42	0,31	0,41	0,34	1	1	1	0,79

Figure 2. Evolution of the adoption probabilities of RT behaviors by respondent profile, 2021-2024. Items were worded so that higher probabilities indicate stronger alignment with RT behaviors.

Objective 3. Chi-square tests (Table 8) reveal that sociodemographic influences on RT behavior profiles vary across 2021–2024, underscoring the complexity of these associations.

Table 8. Significance of socio-demographic differences across RT profiles by year (2021–2024)

Variables	2021	2022	2023	2024
Gender	ns	ns	ns	ns
Age	*	**	ns	**
Household composition	*	*	ns	ns
Education level	ns	ns	ns	***
Employment status	ns	***	ns	ns
Income	ns	ns	*	ns

Note. ns, P > 0.05; *, P ≤ 0.05; **, P ≤ 0.01; ***, P ≤ 0.001.

Discussion:

These results extend previous findings of no homogenous tourist profile (Agyeiwaah & Bangwayo-Skeete, 2024) and highlight the importance of distinguishing between alternative consumption and reduced consumption (Cherrier et al., 2012). For Committed adopters, substitution practices, such as choosing accommodations or attractions for their sustainable orientation, are more integrated than reduction behaviors. In contrast, Pivotal adopters engage more frequently in reduction behaviors.

Sociodemographic predictors varied yearly, with not consistent trends over time. These findings reinforce the conclusions of Yarimoglu and Binboga (2019) and Tasci et al. (2022) who argue that there is no clear consensus on the role of sociodemographic variables explaining RT and that pro-environmental behaviors are highly heterogenous (Cai et al., 2024).

These results also suggest a decline in RT behaviors among Quebec travellers between 2021 and 2024, despite growing social discourse on sustainability. The share of Pivotal adopters fell with a corresponding rise in Non-adopters (+17%), signalling a troubling trend for RT. This aligns with critiques of the attitude-behavior gap, which note that rising environmental concerns and intentions rarely translate into concrete sustainable actions (Luchs et al., 2015).

Targeting strategies should integrate multiple factors, such as motivations and identity, beyond sociodemographics. Yearly shifts in traveller profiles highlight the need for regular updates on RT behaviors adoption.

Conclusion:

By emphasizing behaviors over intentions, this study advances RT research. Practitioners can leverage LCA findings to tailor strategies—nudges for passive segments and incentives for active ones. This study assesses the propensity to engage in RT behaviors, offering a binary snapshot that overlooks depth, consistency or strength of engagement.

Future research should examine the frequency and strength of RT behaviors, along with psychological drivers such as beliefs, perceptions, motivations, and locus of control, to deepen understanding of RT behavior adoption.

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Effect of Price Transparency on Sustainable Consumption

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Socially responsible consumers have a plethora of choices when it comes to buying sustainable clothing. Every brand discusses their commitment to sustainability, either through sourcing or manufacturing practices. However, this also makes it harder for consumers to identify which brands are truly engaged in sustainable practices versus brands that are greenwashing. In this research, we propose that brands that are engaged in sustainable practices can encourage consumers in sustainable consumption by practicing price transparency. Brands that command high prices citing sustainability can improve consumer willingness to buy and overcome price unfairness perceptions among consumers by shifting to transparent pricing. This research offers actionable insights for marketers to improve their brand equity and consumer demand for engaging in sustainability as well as promotes consumer welfare by encouraging firms to be more transparent in their pricing and influencing more sustainable consumption. It also offers guidance to policymakers on implementing regulations benefiting both corporations and consumers in responsible production and consumption.

Motivation and Research Questions:

The United Nations' 12th Sustainable Development Goal (SDG) advocates responsible consumption and production. As policy makers look to implement regulations that require firms to adopt sustainable practices in their supply chain and encourage consumers to make sustainable choices, the fashion industry's toll on the environment often comes under the scanner due to its impact on water use, carbon emissions, and the climate crisis. There is also an increasing consumer awareness on sustainability. The 2019 update on the Fashion industry titled 'Pulse of the Fashion Industry' by BCG mentions that 75% of consumers view sustainability as very important and consider it as a driver in purchasing decisions (BCG 2019).

Growing consumer demand for sustainable products leads firms to adopt sustainable practices in their supply chain. The costs incurred by such practices are passed on to consumers. For example, Patagonia claims that its higher prices are due to its sustainable materials and fair manufacturing practices. Brands expect consumers to pay higher prices and engage in more sustainable consumption. However, limited transparency in pricing models often leads to consumer skepticism about sustainable premium products (Kapferer & Michaut-Denizeau, 2019). For example, Gucci's transition to metal-free tanning and organic materials lead to higher prices (Amatulli, Angelis, Korschun, Romani, 2018). Brands face challenges justifying higher prices for sustainable practices without diluting brand exclusivity (O'Rourke & Strand, 2017).

There is a need to investigate strategies that can encourage brands to continue investing in sustainable practices as well as lead consumers to accept higher prices for sustainable products. In this research, we explore price transparency for sustainable products as a strategy that can benefit both brands and consumers to engage in sustainable behaviors. Specifically, we answer the following research questions:

Does price transparency in luxury brands increase consumer willingness to pay for sustainable products?

• How does pricing transparency affect the perceived value of brands?

• Does price transparency build consumer trust for sustainable premium products?

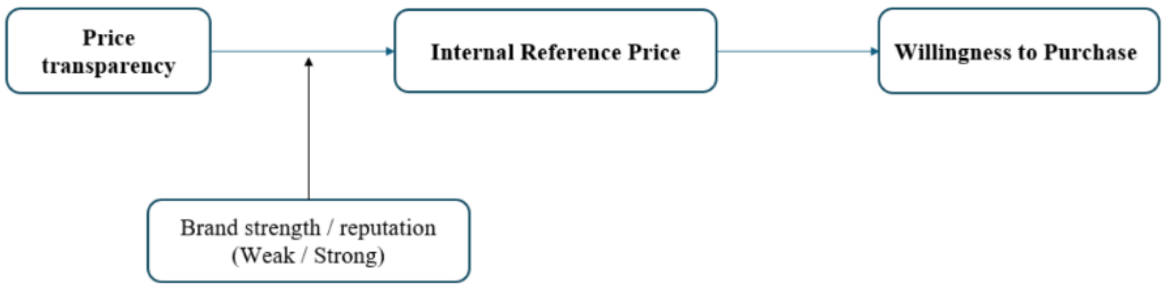
• How do consumers balance their desire for sustainability with brand expectations?

• What is the relationship between transparency and brand authenticity perception?

Theory and Conceptual Model

We draw upon signaling theory that explains the behaviors of firms and consumers under conditions of asymmetric information. Firms can signal their true information to reduce the information asymmetry between firms and consumers, thereby influencing consumers' behavior that results in a competitive advantage for firms.

Figure 1. Conceptual Model



Our conceptual framework (Figure 1) examines the effect of price transparency on outcome variable: consumer willingness to purchase. We examine brand strength as a moderating variable. We theorize that when firms signal their true costs related to sustainability efforts and profit-related information through being transparent with their pricing, this will positively impact consumer willingness to purchase premium-priced sustainable apparel, weaning them away from going for disposable fast-fashion apparel brands, and stronger brands will have a stronger positive moderating impact on consumer willingness to purchase compared to weaker brands.

Study 1 Description:

Study 1 will examine how price transparency influences consumers' willingness to pay for strong versus weak brands. Using a single-factor between-subjects design (N=300), participants will be randomly assigned to an opaque transparency versus full cost transparency condition. In full transparency condition, participants will view premium products with detailed breakdowns of manufacturing costs, sustainability investments, and pricing structures, while the opaque transparency condition will display the total pricing information. The primary dependent measure is willingness to purchase, assessed through standardized scales measuring purchase intention and price sensitivity.

Key Contributions

The project addresses a critical gap in sustainable consumption literature by investigating whether transparency can overcome price unfairness perceptions in sustainable apparel markets. Contributing to both theoretical understanding and practical application, this research explores how brands can transition to more sustainable practices. The findings will provide insights into the relationship between price transparency and consumer willingness to purchase, with implications for sustainable marketing strategies for apparel brands. These findings have important implications for brand managers seeking to implement sustainable practices while maintaining consumer value perception.

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Message framing and consumers purchase abstinence: A pilot study

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Introduction:

Deliberate or intentional anti-consumption is gaining traction and increasingly influencing consumer behavior. While the concepts of consumption minimization and mindful consumption have been studied, the emerging "buy nothing" or non-consumption movement has received comparatively limited academic attention. Marketing communications play a critical role in promoting sustainable behaviors, yet an important question remains: how do different message framings influence anti-consumption behavior? This study investigates the impact of message framing—specifically pro-environmental, pro-savings, and norm-based appeals—on consumers' willingness to abstain from purchasing new items.

Theoretical Background:

Anti-consumption

Anti-consumption (AC), or against consumption, can be expressed as "rejection of consumption" (Lee et al., 2009; Lee et al., 2011; Zavestoski, 2002) which is "intentionally and meaningfully excluding or cutting goods from one's consumption routine or reusing once-acquired goods with the goal of avoiding consumption" (Lee et al., 2011). Consumers choose AC behaviour either as either a "lack of motivation to consume or more as a motivation to refrain from consumption" (Richetin et al., 2012, Garima et al., 2025). Several factors that influence AC behaviour, and include personal motivations, engagement in activism, concerns related to socially or environmentally issues, and prior negative brand or product experiences (Abosag & Farah 2014; Garima et al., 2025). Consumers can also be nudged to consume less (Hummel & Maedche, 2019; Thaler & Sunstein, 2008).

Non-consumption, exemplified by the "buy nothing" and "no buy" movements, is increasingly recognized in sustainability research as a means to transform harmful consumption patterns and deepen understanding of non-consumption behaviors (Cherrier et al., 2011; Davis et al., 2016; Makri, 2020). This research specifically focuses on the role of message framing on non-consumption behavior.

Message framing

How to frame a message – the information or message presented - is key to marketing communications (Amatulli et al., 2019), especially in prosocial contexts (Inês, & Moreira, 2025). Goal framing is a common framing strategy (Levin et al., 1998). Goal framing theory identifies three goal types: hedonic, normative or gain (Lindenberg & Steg, 2007). Hedonic goals improve how an individual feels, such as seeking instant gratification (e.g., more life), a normative goal is based on acting appropriately and on expectations (e.g., conserve more), and a gain focused goal highlights the individual's resource benefits (e.g., start saving) (Lin et al., 2024; Lindenberg & Stef, 2007). Goal framing theory's tenet is that goals activate attention – a scarce resource – to a message (information) and 'places more value on certain outcomes', which impacts behaviour and actions (Lin et al, 2024).

The role of minimalism

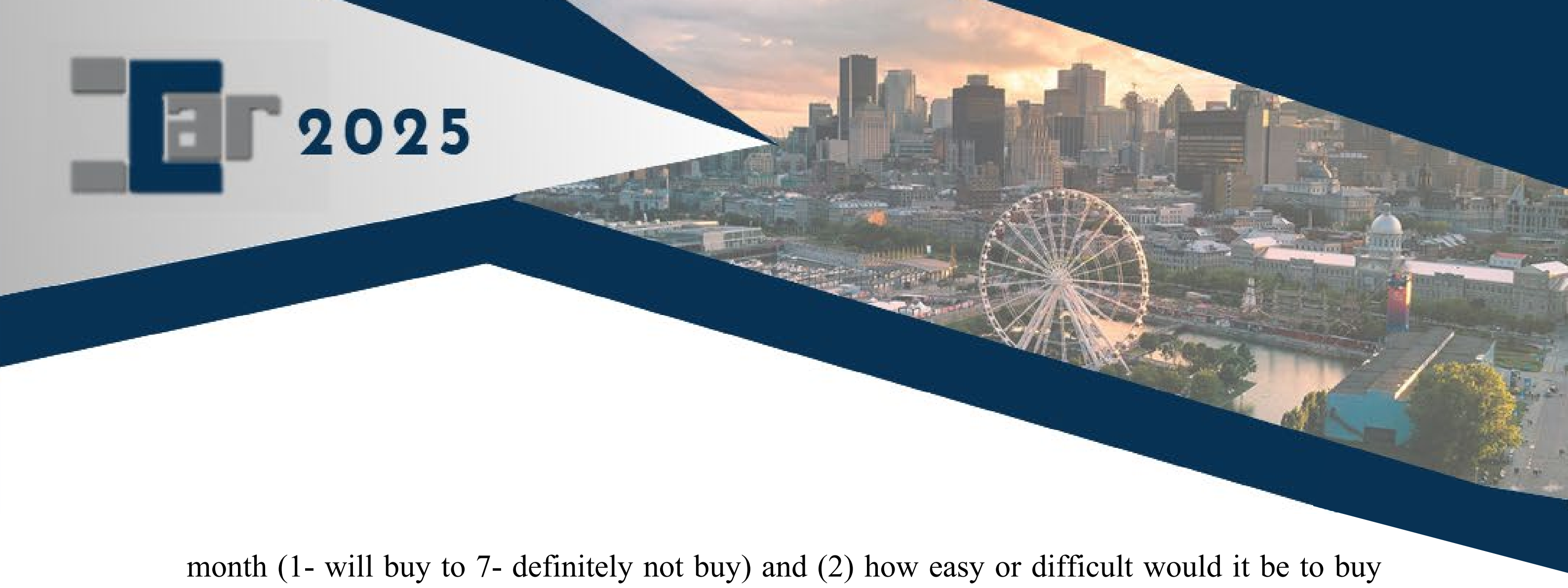
Minimalistic behaviour, defined as reduced possessions and mindfully curated consumption (Chen et al., 2024), has been gaining popularity in recent years (Wilson & Bellezza, 2022). Research highlights its benefits not only for individual well-being but also for society and the environment (Herziger et al., 2020; Panagarkar et al., 2021). Minimalism manifests in various forms, ranging from voluntary simplicity to inconspicuous consumption, with AC representing a notable example within this spectrum (Panagarkar et al., 2021). It is commonly understood through three key dimensions: the number of possessions, a sparse aesthetic, and intentional consumption practices, which together reflect the extent to which consumers value minimalism (Wilson & Bellezza, 2022).

This study intends to answer the call for research pertaining to minimalism and advertising (Taylor, 2024) and highlights the pertinence of the intersection of minimalism and different advertising approaches. Given the significant influence that message framing and minimalism has on consumers' abstinence to purchase, we conducted a pilot study to explore the effect of these variables on consumers' abstinence intent.

Method:

One hundred ninety-eight Australians were recruited using Prolific (100 females, $M_{age} = 38.22$). This study had a 3-group between-subjects design (Message framing: pro-environment vs. pro-savings vs. norm-based).

Participants were asked to consider a scenario where they encountered a social media post advocating for a "Buy Nothing New" month. Participants saw one of 3 types of posts: the pro-environment post "consumer less, conserve more", the pro-savings post "stop spending, start saving" and the norm-based post "less stuff, more life". Once they had seen the post they responded to the dependent variables, (1) how likely they were to buy nothing over the next



month (1- will buy to 7- definitely not buy) and (2) how easy or difficult would it be to buy nothing over the next month (1 - very easy to 7- very difficult), these items were averaged to form the construct Purchase Abstinence. In addition, we also asked participants to respond to the minimalist consumer scale (Wilson & Bellezza, 2022). In the end, participants answered demographic questions.

Results:

Purchase Abstinence Intent. The two dependent variables were averaged (alpha>.70) to come up with a composite score for purchase abstinence intent. An ANOVA on the intent buy nothing new over the next month showed a significant main effect of framing was non-significant, F (2, 192) = .17, p = .85. Analysis with PROCESS (Model 1) revealed a significant interaction of message framing and minimalism on anti-consumption intent, F (1, 192) = 4.55, p = .03. Specifically, consumers who were low in minimalism were more likely to engage in purchase abstinence when they were shown a pro-environment framing (M=3.28), compared to when they were shown a pro-savings framing (M=2.85) or norm-based framing (M=2.43), t (1, 192) = -1.73, p = .08). However, consumers who were high in minimalism were more likely to engage in purchase abstinence when they were shown a norm-based framing (M=3.75), compared to when they were shown a pro-savings framing (M=3.38) or pro-environment framing (M=3.01), t (1, 192) = 1.45, p = .15).

Discussion and implications for theory and practice

This study provides initial evidence into how message framing influences consumer responses to anti-consumption appeals, particularly non-consumption, and contributes to extant literature on TCR (Davis et al., 2016). By demonstrating that pro-environmental messages are more effective for consumers low in minimalism, while norm-based messages resonate more with those high in minimalism, the research advances theory by highlighting the moderating role of value orientations in anti-consumption behavior.

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Nudging resistant consumers to sustainability: Differentiated responses to Abstract and Concrete Messages and the Moderating Role of Product Type

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Introduction:

Behavioral biases such as the green attitude-behavior gap, status quo bias, and risk aversion hinder the switch from conventional to green alternatives (ElHaffar, Durif, & Dubé, 2020; Frederiks et al., 2015). Nevertheless, these biases offer a basis for segmenting populations and tailoring green interventions to different sub-groups. This study examines how consumer segments (Dark Greens, Light Greens, and Non-Greens) respond to abstract (why) versus concrete (how) messages when promoting tangible vs. intangible sustainable alternatives.

Background:

Heterogeneity

Heterogeneity refers to differences across various dimensions of an intervention, particularly in behavioral economics, including participant, outcome, and treatment diversity. Traditionally viewed as noise, participant heterogeneity has been suppressed to experimentally isolate a 'true effect' from interventions (Davidoff, 2009). However, recent evidence indicates that this focus narrows the scope to the 'effect in the group with the greatest numerical representation' (Bryan et al., 2021). This oversight has raised doubts about the credibility of behavioral science, particularly regarding its ability to inform policy and enhance individual lives in real-world contexts, contributing to a replication crisis and reduced effect sizes in larger or different populations (Bryan et al., 2021; Soman & Hossain, 2020).

A similar trend of inconsistent results is observed in responsible consumption interventions, where participant heterogeneity likely plays a significant role. Interventions differ across studies in aspects such as targeted behaviors (e.g., energy saving, recycling) and sample composition. Most studies rely on samples from student populations (Han et al., 2019; Reczek et al., 2018; Yang et al., 2015) and online panels (Amatulli et al., 2019; Jäger & Weber, 2020; Line et al., 2016; Reczek et al., 2018), which, while robust, may lack the necessary homogeneity concerning sustainable consumption. We argue that the diversity in participants' perceptions and engagement with green and other responsible behavior leads to varying outcomes driven by characteristics of consumers entertaining different engagement patterns.

Abstract and Concrete Nudges

The construal level theory posits that individuals mentally represent objects and messages at varying levels of abstraction, categorized as high or low construal levels. High-level construals are more abstract and psychologically distant, relating to the desirability and justifications for actions, whereas low-level construals are concrete, psychologically close, and focus on the feasibility and actionable steps toward achieving these goals (Trope et al., 2007). The construal level of a message significantly influences consumer reactions (Liberman & Trope, 1998). Within sustainable consumption literature, various construal messages have been examined, yielding inconsistent results regarding their effectiveness (Han et al., 2019; Segev et al., 2015; Yang et al., 2015). Research has identified two streams: one advocating for congruency between the message and the abstract representation of environmental benefits, and another arguing that this abstraction can deter action, suggesting that concrete levels may be more effective for encouraging sustainable behavior (Jäger & Weber, 2020; Reczek et al., 2018). With feasibility mirroring concrete and desirability abstract, we posit that consumer segments will respond differently to messages focused on feasibility versus desirability in green communication.

Product Type

Product type has a moderating role in consumers' response to different message considerations, specifically in green communication (Kong & Zhang, 2014). Product type can vary in tangibility in their attributes, ranging from highly tangible to highly intangible, echoing the concrete and abstract construal level of products. We assume that the congruency between the construal level of the message and the product tangibility attribute adds to the effectiveness and persuasiveness of the communication (Ding & Keh, 2017).

Methodology

Study 1 Participants (n=216) were recruited online and responded to questions on attitude, intention, and behavior (TPB variables) toward green products. Later, they were randomly assigned to abstract or concrete message conditions promoting refillable shampoo. Then they responded to questions regarding their attitude and intention to buy, recommend, and seek information related to the product.

Study 2 This study replicated Study 1 in the context of sustainable investing. Participants (n=213) answered questions measuring TPB variables. Then they were exposed to LinkedIn posts reflecting abstract and concrete conditions promoting a sustainable investing platform. They answered questions on their intention to seek information, recommend, and use the platform.

Results and Discussion:

	Dark Greens			Light Greens			Non-Greens		
	Desirability	Feasibility	p-value	Desirability	Feasibility	P-value	Desirability	Feasibility	p-value
	Mean | SD	Mean | SD		Mean | SD	Mean | SD		Mean | SD	Mean | SD	
Attitude towards the product	6.29| 0.87	6.28| 0.77	0.943	5.83| 0.78	5.86| 0.81	0.857	4.85| 1.29	5.64| 1.34	**0.030** *
Attitude towards the brand	5.99| 0.89	6.04 | 0.76	0.833	5.65 |0.92	5.71 | 1.10	0.761	4.7 | 1.41	5.19 | 1.45	0.204
Intention to buy	5.48 |1.26	5.03|0.97	0.292	4.89 | 1.13	4.15 | 1.05	0.866	3.38 | 1.58	3.74 | 1.25	0.15
Intention to recommend	5.48 | 1.26	5.67 |1.05	0.494	4.89| 1.13	4.98 |1.35	0.719	3.38 | 1.58	4.45 | 1.79	**0.021** *
Information seeking intention	5.53 | 1.35	5.56 | 1.20	0.928	5.23| 1.09	4.85| 1.31	0.139	2.94 | 1.62	3.70 | 1.60	**0.086 .**

Table 1. Results of the outcome variables of Study 1

Study 1: Non-Greens showed significant differences in attitude ($p<0.05$, $t(55)=2.23$), intention to recommend ($p<0.05$, $t(55)=2.36$), and marginal significance in information-seeking ($p=0.08$, $t(55)=1.74$), favoring the concrete message. However, no significant difference was found between abstract and concrete conditions for Dark Greens and Light Greens. These two segments, nonetheless, had more favorable responses overall compared to Non-Greens.

Study 2: Similar trends were observed, with no significant differences for Dark Greens and Light Greens. Non-Greens showed significant differences in the intention to seek information ($p<0.05$, $F(1, 58)=5.747$) and marginal significance in the intention to recommend ($p=0.087$, $F(1, 58)=3.03$), favoring, however, the abstract message. Dark Greens and Light Greens again showed more favorable responses than Non-Greens overall.

The study reveals that Non-Greens respond better to concrete messages when promoting tangible products, and to abstract messages for intangible products. This could be because feasibility-focused messages reduce perceived effort or complexity, leading to higher intention among Non-Greens, while desirability-focused (why) messages make the intangible product seem more worthwhile, linking it to future goals or values.

Conclusion:

The findings across both studies demonstrate a nuanced pattern in how different consumer segments respond to construal framing in sustainable consumption contexts. Dark Greens and Light Greens, showed no significant differences between concrete and abstract frames in either study, indicating they already hold favorable attitudes toward sustainable choices, independent of message framing.

In contrast, for Non-Greens, concrete, feasibility-focused messages generated more positive attitudes and intentions in tangible products, potentially by reducing perceived complexity and highlighting actionable steps. However, in scenarios involving intangible products, Non-Greens favored abstract, desirability-focused messages, suggesting that these higher construal levels enhance product appeal by linking it to broader values or future-oriented goals.

Our findings underscore the importance of addressing the non-green segment, which has traditionally received minimal attention in sustainable marketing efforts, with targeted messaging strategies. Unlike Dark Greens and Light Greens, which tend to support eco-friendly products regardless of framing, Non-Greens showed distinct preferences. By revealing how message framing can be tailored to appeal to Non-Greens, this study contributes to increasing engagement with sustainable products in a segment that has historically been difficult to reach.

Future steps for this research project involve exploring the underlying mechanisms of these responses by measuring skepticism, product familiarity, and product fit in similar experimental settings.

References are available upon request.

Move over, logos: Anti-consumption through branded body movements

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Branded embodiments are emblematic body movements, such as gestures, dances, and poses that identify brands, much like a brand name, logo, or other brand element. Consider *Star Trek's* "Vulcan Salute" (Freestone et al., 2023), footballers' unique goal celebrations (Gonzalez-Jimenez et al., 2019; Turner, 2012), and the "Nazi Salute" (Allert, 2008). Emerging through consumers' social interactions, similar to emblematic body movements worldwide (Kendon, 2004), they are both symbols of brands and consumers. However, consumers are rarely wholly pro-brand or consumption, despite consumer brand co-creation being considered through this lens (e.g., Cova & Cova, 2009; Schau et al., 2009). Branded embodiments are often polarising symbols of consumers' anti-consumption, arising in high-identity, high-rejection arenas such as politics, sports, and entertainment. Consider the iconic gestures of Trump, a polarising human brand (Thomson, 2006), gaining recognition as a divisive symbol of resistance through the reflexive interactions and contested meanings of consumers who are strongly for *and* against him (Goldstein et al., 2020; Hall et al., 2016).

This conceptual paper, therefore, explores how consumer groups co-create branded embodiments to not only support symbolised brands, but reject or resist them, rivals, or consumption. Understanding how pro- *and* anti-consumption behaviours intersect is critical to realising a brand's full potential, yet anti-consumption is still an emerging research area (Lee, 2022). Exploring consumer identities in anti-consumption is important as they underscore consumption resistance (Cherrier, 2009). Further, we contribute to branding literature by introducing branded embodiments, responding to calls to explore dynamic and multi-dimensional brand elements (Keller, 2021). We offer new insight into consumer-brand co-creation, showing how consumers negotiate and create brand elements. This matters as brands shift from practitioner-controlled (Aaker, 1996; Keller & Swaminathan, 2020) to co-created by hyperconnected consumers (Siano et al., 2022; Swaminathan et al., 2020; Veloutsou, 2023;

Muniz & O'Guinn, 2001). Finally, we contribute to consumer rivalry literature by exploring brand opposition through consumer groups as opposed to a marketplace competition perspective (see Berendt et al., 2018; Ewing et al., 2013; Muniz & Hamer, 2001).

Conceptual Framework:

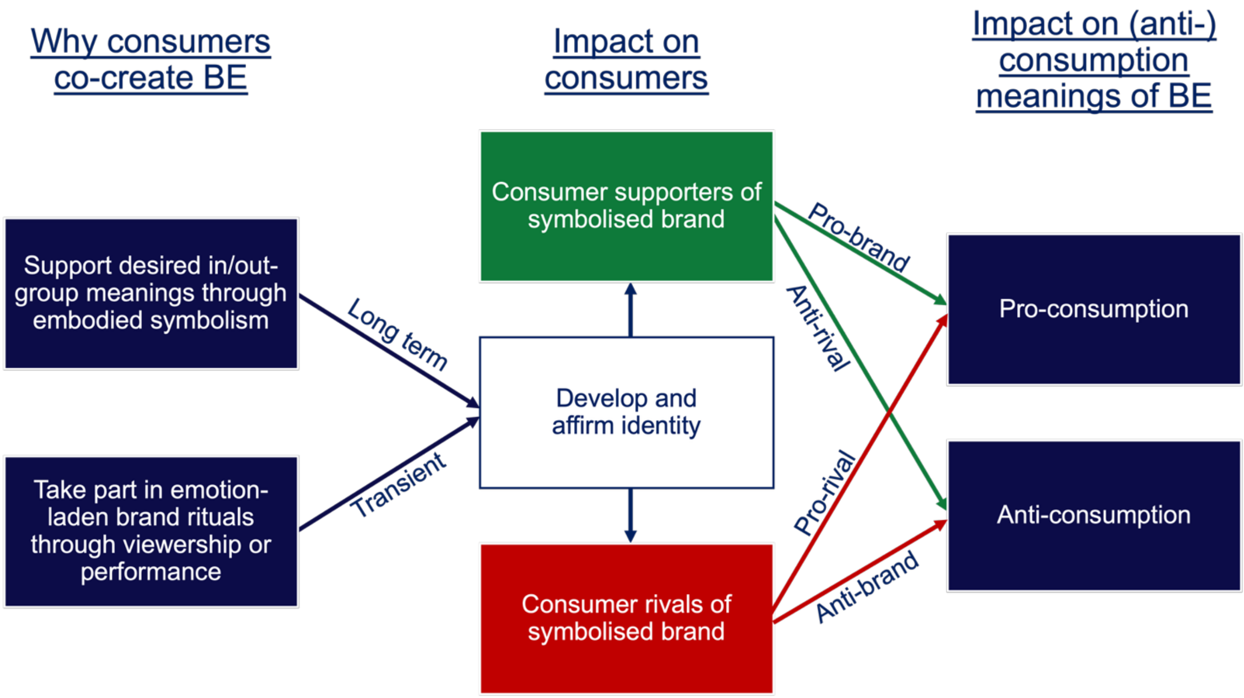
We use social identity theory (SIT; Tajfel & Turner, 1979) and interaction ritual theory (IRT; Collins, 2004; Goffman, 1967) to conceptualise how identity compels pro- and anti-brand consumers to co-create branded embodiments to both support and reject consumption in opposing ways relating to the symbolised brand. They use body movement as it promotes strong symbolism, emotion, interaction, and collectivism, with resulting identities being particularly strong, reactive, and rivalistic. As shown in Figure 1, social identity may compel consumers to co-create branded embodiments as efficient symbols of in-group superiority and out-group inferiority, supporting long-term identity. Alternatively, consumers may also use branded embodiments to support more transient identities in emotion-laden rituals where the body is central. In both cases, identity is reflexive and reactive to outsiders, encouraging their favoured consumption and discouraging competing consumption. Both co-creative processes may develop and affirm their identities alongside *or* against the symbolised brand; brands tell consumers who they are and are *not* (Escalas & Bettman, 2003, 2005).

Regarding social identity, consumers may co-create branded embodiments as they can symbolically support desired in-group meanings (brand rivals or supporters) and out-group meanings (the opposite), facilitating their long-term identity projects in relation to brands. From an SIT perspective, consumers strive to have favourable group memberships, or social identity. Common symbols, behaviours, and meanings can facilitate social identification by supporting improved perceived in-group status and out-group inferiority (see Ashforth & Mael, 1989, p. 27). Consider political branded embodiments the world over: Angela Merkel's Merkel-Raute or "Merkel diamond" hand gesture was embraced by devoted party supporters as a symbol that the country was in capable hands, while opponents used it to ridicule her. The "OK" gesture has been co-opted as a symbol of the far-right U.S. group, the Proud Boys and is now carefully avoided by many on the left. Branded embodiments are efficient at serving dual meanings across groups and consumption contexts, as body communication is a strong marker and interactionist glue for social identity (Kendon, 2004).

Consumers may also co-create branded embodiment to facilitate collective interactive experiences, or rituals. IRT considers how individuals regularly take part in rituals because shared bodily experiences offer them a heightened sense of vitality and group membership (Collins, 2004). Indeed, consumers may co-create branded embodiments as shared *experiences*, viewing or performing them together, where they gain a sense of identity rather than symbolically supporting social identity. Their identity is constructed relative to others and is, therefore, reflexive and reactive to perceived opposition. To illustrate, branded embodiments are prominent within political rituals such as rallies, marches, and protests, with repeated use and emotion fostering greater identity and group boundaries. Allert (2008) argues that the strength and polarisation of the "Nazi Salute" in Nazi Germany formed through its use in mass rituals, small-scale rituals in schools and workplaces, and the more private rituals of friends and family.

Figure 1

Consumers' identity-driven co-creation of polarising branded embodiments



Conclusion:

We offer insight into how consumers, compelled through existing or emerging identity concerns, co-create branded embodiments to support and reject consumption through social identity or interaction ritual mechanisms. The embodiments' dual pro-/anti-consumption functions reflect how consumer identity is constructed relative to others. We extend branding literature by introducing a new form of brand element with implications for brand (dis)identification and brand experience. We contribute to anti-consumption, consumer-brand co-creation, and rivalry literature by offering insight into how consumers with rival identities converge to co-create brands for pro- and anti-consumption purposes. Future research should examine the conditions under which brand embodiments emerge and their impacts on brands and consumers to guide clear theoretical and practical implications. It should also investigate the nuances of identity and anti-consumption, as identity is one of the most significant predictors of pro- and anti-brand outcomes. Identity concerns promote anti-consumption through branded embodiments, yet plenty of brands support identification and do not lead to significant anti-consumption behaviours: why is this? Tied to these areas, this research is limited by its focus on generalisability and identity as the primary driver, which may overlook individual, contextual, or nuanced variations in how branded embodiments emerge and function.

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The Institutionalization of Zero Waste and the Cracks in Practices

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Can anti-consumption—defined as the purposive acts and practices that resist brands, products, services, or the broader ideology of consumption (Cherrier, 2009)—gain legitimacy within societies dominated by overconsumption? Research suggests it can. For example, Hiatt, Sine, and Tolbert (2009) document how anti-alcohol activists contributed to a cultural shift that eventually enabled temperance legislation. Similarly, Gollnhofer, Weijo, and Schouten (2019) show how dumpster divers and alternative retailers opposed food waste, contributing to new food recovery regulations. Likewise, Maguire and Hardy's (2009) account of the de-institutionalization of a top-selling insecticide (DDT) in the United States, demonstrate the capacities of anti-consumption rhetorical strategics including the publication of Silent Spring to successful categorize DDT as unethical and inappropriate within society leading to its national ban. We also know of the deinstitutionalization of anti-asbestos emerging from successive anti-consumption actions and cumulative struggles against actors who benefit from the existing order (Peton & Blanc, 2009, 2010). Scholars also reveals how music sharing has been partially institutionalized through user-driven defiance of industry norms (Giesler, 2008). Despite these insights, we still lack a thorough understanding of whether and how anti-consumption can stabilize as regimes of practice—a coherent configuration of interrelated practices that are maintained through shared meanings, skills, material arrangements, and institutional supports, shaping how people act within a specific domain (e.g., alcohol, music, waste) (Welch & Warde, 2015). This paper addresses that gap by examining the institutionalization of the zero waste—defined here as a condition of cultural alignment, normative support, and legal congruence (Scott, 1995)—and its enactment in everyday consumer life.

Zero waste, as a consciously articulated stance against wastefulness, advocates for preventing waste before it is created. Its core principles—refuse, reduce, reuse, recycle, and rot—are both a framework and a call to action: refuse what is unnecessary (e.g., single-use plastics, promotional freebies), reduce consumption overall, reuse through repair and second-hand use, recycle only what cannot be refused, reduced, or reused, and compost organic matter (Cherrier & Ture, 2023; Chertkovskaya, Hasselbalch, & Stripple, 2024). Initially a grassroots movement, zero waste has evolved into an institutionalized agenda, supported by policymakers, municipalities, businesses, NGOs, and individual consumers (Berlingen, 2014; Hajek, 2023;

Zaman, 2015). Cities such as San Francisco, US and Roubaix, France, have formally adopted zero waste goals, and lifestyle shifts toward minimal waste are increasingly visible (Hajek, 2023; Lugo, Ail, & Castaldi, 2020; Singh, Ramakrishna, & Gupta, 2017 Weiss, 2016; Zaman & Lehmann, 2011). Significantly, on December 14, 2022, the UN General Assembly established March 30 as the International Day of Zero Waste, reinforcing the growing institutional embrace of zero waste principles as part of a lifecycle approach to sustainable production and consumption (UNEP, 2025).

This paper draws on archival data, participant observation in zero waste workshops, and interviews with key stakeholders—including zero waste retailers, policy makers, and consumers—to examine how zero waste has gained legitimacy in France and explore its enactment at the everyday life of consumers.

The analysis reveals a web of interdependent actors involved in the institutionalization of zero waste in France: government agencies (e.g., ADEME), NGOs (e.g., Zero Waste France, GAIA), corporate actors (e.g., Carrefour, Pyxo, Melvita), startups (e.g., Hipli, Trizzy), sectoral associations (e.g., Réseau Vrac, Réseau Consigne), and waste management firms (e.g., Paprec). Since 1997, these actors have engaged in various forms of institutional work (normative, political, cognitive, identity, and material and technological work) to legitimize and embed zero waste within normative, cognitive, and regulatory structures. These findings emphasize the importance of mobilizing a broad range of actors with various levels of legitimacy and power in the field of waste management to press for governmental waste prevention interventions and cultural shifts around waste. In the French context, the mobilization of various zero waste actors occurred through field configuring events such as reports of health concerns leading to the closure of the Gilly-sur-Isère incinerator in 2001 **(**Caprioli, 2004; Luneau, 2012)**,** risk awareness campaigns, and the scapegoating of incinerators, plastic, packaging, and more recently fast fashion, for health and environmental risks.

Although zero waste principles are starting to integrate France's normative, cognitive, and regulatory structures, the analysis also uncovers the fragility of zero waste as a regime of practice. Fieldwork reveals cracks in implementation where aspirational ideals confront everyday constraints. These include consumers' time scarcity, lack of skills and competencies, spatial limitations, and superimposing risk perceptions. Such frictions underscore that institutionalization does not guarantee seamless practices. Instead, they reveal the boundaries of institutional scaffolding (Aksom, 2023) and offer insight into how the institutionalization of zero waste does not guarantee seamless practices.

By exposing the frictional zones where institutionalization and practice misalign, the paper clarifies why anti-consumption, despite all its urgency, struggles to generate meaningful change in a society dominated by overconsumption. Scholars argue that the failure of anti-consumption in driving societal change can be traced to the adaptive capacity of capitalism itself (Fisher, 2014; Rice, 2011). As Fisher (2014) famously explains, capitalism functions as an endlessly adaptable machinery that absorbs and neutralizes critique rather than being destabilized by it. This means that even when individuals or movements call for reduced consumption, their critiques are often quickly commodified and turned into new market opportunities, a process scholars describe as co-optation (Holt, 2002). For instance, Jones and Hietanen (2023) and Darmody and Zwick (2020) argue that discourses against overconsumption paradoxically sustain the very system they resist, as they keep attention focused on consumption as the primary site of identity and social change. This dynamic creates a feedback loop in which critiques of consumer culture become fuel for its renewal, blunting their transformative potential and helping explain why large-scale societal shifts toward sustainability or degrowth remain elusive.

Critical scholarship has barely scratched the surface of consumer capitalism's endlessly adaptive machinery (Fisher, 2014). Our exploration of the institutionalization of zero waste and its failed enactment in everyday practices points to the difficulties for zero waste to stabilize as a regime of practice. This, we argue, is the result of framing zero waste as a strategy to mitigate risks. In the French context, zero waste has emerged in response to health risks associated with incinerators, and gradually gained legitimacy as plastics, packaging, and fast fashion were framed as scapegoats for health and environmental risks associated with waste. One point of struggle in the framing of zero waste as risk mitigation strategy is that risks are sticky in household (Cherrier, 2022), superimpose one another (Cherrier & Ture, 2023), and their pertinence and visibility are contextually contingent (Lévesque, 2025). The result is that consumers perceive multiple, overlapping, and conflicting waste-related risks leading to distrust and systemic risk anxiety (Humphreys & Thompson, 2014). This, we argue, hinders, in part, zero waste to stabilize as a regime of practice.

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Less-ish: Marketing sufficiency in a world that wants more

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Keywords: sufficiency, sustainable consumption, sustainable marketing, less-ish

Environmental and social crises have intensified calls for sufficiency, the practice of consuming enough, not more, as a pathway to sustainable consumption. Unlike techno-economic approaches, such as green growth, sufficiency places deliberate limits on consumption, eliminating options that promote ungeneralisable excess. However, current applications of sufficiency in marketing often remain embedded in the language and logic of growth. By marketing *less* as a path to *more*, companies reinforce the growth logics that sufficiency seeks to disrupt. The result is what we call *less-ish*: a symbolic form of sufficiency that avoids deeper structural change. We develop this argument in three ways. First, by drawing on Regulatory Focus Theory, we show how less-ish aligns with promotion-focused motivations (e.g., more joy, more time, more meaning), making it attractive to consumers. Second, we explain how less-ish exploits the gap between consumer preferences for sufficiency and their actual behaviours, leading to rebound effects. Third, using the multi-level perspective on sustainability transitions, we illustrate how firms' operationalisation of sufficiency encourages self-licensing and functions as a lock-in mechanism. Cases from fashion and second-hand platforms, including Vinted, demonstrate how the purpose of sufficiency is subverted by accommodating, rather than challenging, unsustainable consumption-production systems. To move beyond symbolic gestures, we argue that firms must actively internalise limits so that sufficiency can reconfigure consumption-production systems.

Introduction:

Environmental and social crises have intensified calls for sufficiency, the practice of consuming enough, not more, as a pathway to sustainable consumption (Bocken & Short, 2016). Unlike green growth or eco-efficiency strategies, sufficiency sets minimum and maximum boundaries around consumption, eliminating options that encourage ungeneralisable excess (Bärnthaler, 2024). It recognises that some consumption is necessary (e.g., food, shelter), but challenges excessive consumption as an unnecessary and unsustainable use of scarce resources (Freudenreich & Schaltegger, 2020).

Despite its transformative potential, sufficiency is often subverted in the marketplace. As

Guillard (2024) points out, many firms adopt the appearance of sufficiency while still promoting consumption. We refer to this emerging trend as *less-ish,* a symbolic form of sufficiency, where firms offer *less,* such as fewer features or limited ownership, which they promote as delivering *more* (e.g., more clarity, more connection). By reframing less as a path to more, firms neutralise the disruptive potential of sufficiency while reinforcing familiar consumption patterns. This pattern aligns with broader critiques of "green growth" and "naïve" approaches to sustainability (Dekhili et al., 2025; Parguel et al., 2017), which often represent surface-level fixes that fail to address the underlying systemic issues embedded in current consumption-production systems (Geel et al., 2023).

This paper extends these arguments to sufficiency, by theorising *less-ish* as a distinct marketing response to shifting consumer preferences towards sustainability. We develop our argument in three ways. First, by drawing on Regulatory Focus Theory, we show how less-ish aligns with promotion-focused motivations that highlight gains such as time and simplicity, making sufficiency offerings attractive to consumers (Krpan & Basso, 2021). Second, we explain how less-ish exploits the gap between consumer preferences for sufficiency and their actual behaviours, which may generate rebound effects (Krpan et al., 2025). Third, using the multi-level perspective (Geels, 2002; Geels et al., 2023), we illustrate how firms' operationalisation of sufficiency without internalising reinforces lock-in to unsustainable consumption-production systems. Using cases from fast fashion and second-hand platforms, we illustrate how firms subvert sufficiency to accommodate, rather than transform these systems. We conclude that sufficiency can only deliver on its radical potential if firms actively internalise limits to reconfigure consumption-production systems.

Background Literature:

Sufficiency

Sufficiency offers a clear alternative to the dominant green growth and eco-efficiency approaches in sustainable business discourse. While these approaches seek to improve how we consume, through cleaner technology and more sustainable options, sufficiency questions what, how much, and why we consume in the first place. It introduces deliberate limits, *eliminating* choices that promote unsustainable consumption (Bärnthaler, 2024, p. 961) (original emphasis). Sufficiency emphasises lifestyle shifts, including mobility (e.g., taking fewer trips or using alternative modes of transportation) and food (eating seasonal or being vegetarian) (Guillard, 2024), which are often framed as consuming less, but better.

Recent work has highlighted the psychological challenges sufficiency poses. Regulatory Focus Theory (Higgins, 1997) suggests that consumers respond differently depending on whether messages emphasise promotion (gains and aspirations) or prevention (avoiding losses). Krpan and Basso (2021) found that promotion-framed messages about degrowth (e.g., focusing on renewal and positive outcomes) were more persuasive than messages focused on sacrifice or restraint. Firms have applied this logic in their operationalisation of sufficiency by framing reductions in terms of positive consumer outcomes, rather than in terms of loss. Less Wi-Fi becomes more connection and fewer decisions become more free time, aligning with consumers' desires for identity and well-being.

While sufficiency approaches take something *away* from consumers, less-ish marketing reframes this loss as a *gain* by focusing on the positive outcomes that arise from simplifying products and services. Such marketing campaigns articulate the value of sufficiency through its ability to achieve positive results (e.g., increasing well-being) and avoid negative outcomes (e.g., reducing stress, minimising carbon emissions). This reframing helps explain why less-ish appeals resonate with consumers, even when they subvert sufficiency's radical intent.

Less-ish appeals also exploit consumers' preference-behavioural gaps. While consumers increasingly report preferences for sustainable lifestyles, their actions often diverge. Research calls for analysing consumers' preferences and behaviour, to capture these contradictions (Krpan et al., 2025). This is especially important given the evidence of rebound effects; consumers may feel licensed to indulge more when they perceive an action, like buying items second-hand, to be more sustainable (Parguel et al., 2017). These insights demonstrate that sufficiency requires internal shifts within firms, as well as how they market sufficiency to consumers.

Sufficiency in Marketing

Despite its transformative potential, sufficiency remains under-theorised in marketing. Marketing plays a central role in shaping needs, framing value, and normalising patterns of acquisition. Yet, few studies interrogate how marketing might enable restraint, enoughness, or meaningful non-consumption. Existing examples focus on designing products for longevity, lifecycle extension services, and promoting alternate forms of use (Bocken et al., 2022). This shift towards sufficiency necessitates reconceptualising goods normally seen as consumables (e.g., fashion, homewares) as durables (Freudenreich & Schaltegger, 2020). Despite scattered examples, such practices remain marginal. Most firms continue to pursue *green* or *eco* innovations, promoting growth and profitability, where sustainability is achieved through efficiency or circularity, rather than reductions in production and consumption.

Beyond firm- and consumer-level dynamics, sufficiency can also be understood through a systems perspective. The multi-level perspective on socio-technical transitions (Geels, 2002; Geels et al., 2023) highlights how niche innovations, such as sufficiency-oriented business models, interact with incumbent regimes and wider socio-cultural landscapes. While sufficiency has the potential to disrupt growth logics, current marketing practices often co-opt such initiatives into growth-compatible forms, preventing systemic transformation. This absorption is reinforced by consumer preference-behaviour gaps and rebound effects, where actions intended to reduce consumption paradoxically encourage more of it (Santarius & Soland, 2018). For example, buying second-hand can legitimise higher overall purchasing, by lowering the perceived environmental impact (Parguel et al., 2017). Together, these insights suggest that sufficiency must be operationalised across levels, and theorised in terms of how firms' practices reinforce or destabilise consumption-production systems.

Consequently, sufficiency-based research has largely focused on firm reactions to changing consumer behaviour, rather than their ability to *actively* promote sufficiency (Freudenreich & Schaltegger, 2020). This passivity reflects a broader reluctance to question marketing's foundational role in stimulating demand. As Sarokin and Bocken (2024) argue, there is an urgent need to examine how businesses can actively influence "consumer behaviour towards sufficiency principles" (p. 2). Marketing, therefore, has a significant role to play in shifting perception and behaviour, from over-consumption and consumers to enough and users.

Representative Case: Fast Fashion

Fast fashion is responsible for 4-10% of all GHG emissions and has well-documented impacts on water pollution, labour rights, and textile waste (Ellen MacArthur Foundation, 2017). While many firms have responded with circularity initiatives, these are increasingly criticised for failing to reduce overall consumption. Sarokin & Bocken (2024) argue that such initiatives often foster a sense of responsible participation, allowing consumers to feel better about continuing to buy and buy more.

Instead of confronting overproduction, many brands adopt the appearance of sufficiency while retaining the mechanics of growth. As Guillard (2024) shows, clothing rental services, like *Le Closet,* encourage trend-driven consumption in the language of access over ownership. Rental services highlight the excitement of staying on trend, *reducing* individual ownership in exchange for *more* frequent closet updates. Similarly, H&M and Coach incentivise take-back and resale initiatives with in-store credit, reinforcing purchase loops instead of breaking them. Such programs frame recycling as a reward, helping consumers seemingly create *less* waste, while offering them *more* reasons to return and consume again. These initiatives may improve material flows, but they often sidestep the deeper problems of overproduction and overconsumption, promoting circularity without reduction and sustainability without transformation.

Representative Case: Vinted

Second-hand and resale platforms extend these dynamics. Vinted, Europe's largest peer-to-peer fashion platform, emphasises its positive environmental impact through reduced new-fashion purchases and carbon emissions, as well as the reuse of clothing items through resale, extending their lifespan (Vinted, 2023). Customer testimonials from Vinted's 2023 sustainability impact report frame second-hand consumption as delivering more joy, more uniqueness, and more value. Such narratives reframe the trade-off between new and used items as a way to allow consumers to access *more* variety, *more* exciting purchase cycles (e.g., the thrill of discovery), all at a lower cost.

However, recent research by Dekhili et al. (2025), which focused on Vinted, found that the daily influx of new listings and discount promotions encouraged overconsumption, leading to circular rebound effects. Their findings echo the previous findings of Parguel et al. (2017), who found that buying items second-hand can lead to overconsumption, as consumers perceive these purchases as less harmful and therefore allow themselves to buy more frequently.

Even sustainability appeals on the platform, such as 'better for the planet', or saving beautiful clothing from waste, are woven into narratives of pleasure and variety, reinforcing the logic of continual consumption rather than reduction. Most notably, the potential *losses* from dissatisfaction or changing trends are *minimised* by emphasising the ease of reselling unwanted items on the platform, while consumers *gain* greater freedom to explore new styles and experiment with self-expression. In this way, second-hand platforms like Vinted co-opt sufficiency (good enough, nice enough, new enough) through promotional appeals to sustain growth under the guise of sustainability.

Discussion:

The examples above illustrate how sufficiency is often coopted, and reframed into a symbolic form of *less-ish.* Companies highlight reductions but present them as added value for consumers. In this way, *less* is sold as *more,* undermining the disruptive potential of sufficiency. By using promotional language, such as "more value", companies make sufficiency attractive to consumers without challenging the deeper logics of growth which are embedded in our consumption-production systems (Krpan & Basso, 2021). In this framing, the burden of change rests largely on individuals; consumers must make the 'right' choices in a system structured around abundance, convenience, and growth.

A sufficiency-oriented marketing logic would necessitate reconceptualising the purpose of marketing itself. It would focus on cultivating long-term use and emotional attachment, as well as conscious restraint and responsible disengagement. Yet, the fast fashion and resale cases illustrate a clear reluctance to engage with sufficiency on these terms. The failure to decouple circularity, green, and efficiency-oriented initiatives *from* growth points to the emergence of *less-ish*: a symbolic form of sufficiency that subtracts elements (packaging, features, ownership) while promoting, and sometimes intensifying, consumption.

In this way, subtraction is reframed as added value: less clutter, more simplicity; less stuff, more meaning, enabling firms to signal sustainability while continuing to sell more. It is important to note that *less-ish* is not the same as greenwashing. Greenwashing involves misrepresenting or exaggerating sustainability claims (Lyon & Montgomery, 2015), and more broadly reflects forms of "sustainability-washing" that rely on symbolic appeals rather than substantive change. In contrast, *less-ish* reflects genuine initiatives, like rental schemes, take-back programs, or resale platforms that are intended, but which fail, to improve existing consumption-production systems. The problem is that these initiatives are ultimately subverted into growth-compatible strategies. Instead of reducing overall production and consumption, they create new avenues for growth while reinforcing consumer engagement. Thus, sufficiency is often co-opted in a way that dilutes its transformative intent, not through deception, but through absorption into existing growth logics.

To move beyond less-ish, sufficiency must be considered as part of a wider process of systemic transformation. Firms play an important role in connecting individual consumer practices to organisational strategies and the wider systems in which they operate.

At the individual level, consumers often express support for sufficiency, but behavioural rebounds are common. Platforms like Vinted illustrate how the perception of second-hand purchases as 'green' can encourage more frequent buying, as users scroll through daily listings and justify purchases as low impact (Parguel et al., 2017; Dekhili et al., 2025). Similarly, repair initiatives extend product lifecycles but can also be used as after-sales revenue streams to keep customers tethered to brands. For example, the repair schemes may simultaneously encourage regular model upgrades, making repairs an add-on to growth rather than an alternative. This dynamic reflects systemic lock-ins (Geels et al., 2023) and circular rebound effects (Dekhili et al., 2025), where initiatives meant to be radical actually reinforce existing growth logics. To decouple, firms could structure repair services with commitments such as 10-year guaranteed spare parts availability, or pricing models where repairs are "included" or cheaper than replacement, discouraging churn. Likewise, resale platforms could introduce "slow resell" features, linking resale to minimum ownership periods, emphasising purchasing for longevity.

At the firm level, many initiatives signal sufficiency but still incentivise throughput. Take-back programs may recover materials but are frequently tied to store credits, which stimulate more buying. For example, H&M's provides garment collection bins and reward customers who contribute items with discounts, encouraging consumers to drop off old clothes while buying new ones. To move from *less-ish* to transformation, firms could commit to reducing the absolute number of new collections and items launched, linking limited inventories with longer product lifespans. Take-back schemes could be restructured so consumers earn credits towards repair services, not towards buying new products, thereby extending use rather than accelerating replacement. Such shifts require business model innovations for sufficiency (Bocken & Short, 2016), which includes commitments to limits.

At the system level, entrenched lock-ins help subvert the radical intent of sufficiency. The adoption of eco-labels may be used to justify higher sales, while lifecycle extension standards risk becoming marketing tools rather than limits on production and consumption. A practical example is the EU's right to repair directive: while it requires manufacturers to provide spare parts, many firms are charging inflated prices, deterring lifecycle extension while also creating a new profit stream. To decouple, policies are needed to standardise affordable spare parts and repair services, disincentivising accelerated replacements across whole sectors. Similarly, policy can require firms to disclose the total emissions produced *and* the total emissions avoided, preventing selective storytelling. This shifts reporting from a branding exercise to a mechanism for accountability, supporting systemic reductions and a deeper understanding among consumers that 'better' is still too much.

Conclusion:

Sufficiency offers a pathway to sustainability through limits, but in practice, it is often co-opted into less-ish marketing appeals: a symbolic form of sufficiency that sustains the logics of growth. This paper draws on two representative cases to illustrate how firms operationalise sufficiency, using promotion-focused framing that resonates with consumers. Less-ish marketing appeals exploit consumers' preference-behaviour gap, helping consumers rationalise and justify continued consumption, undermining behavioural change, and resulting in rebound effects.

From an individual perspective, firms must account for the ways in which consumers rationalise additional purchases when they are framed as 'less' harmful. Instead of using less-ish appeals, firms should highlight durability, moderation, and meaningful non-consumption, reframing sufficiency as an aspiration rather than a sacrifice. At the firm level, sufficiency must be embedded into business models, not just marketing campaigns, through structural commitments to limits, lifecycle guarantees, and absolute limits on production. At the systemic level, sufficiency requires policies and industry standards that move beyond selective reporting, mandating transparency about prevented and total ongoing emissions, ensuring firms cannot offset reductions with hidden growth.

Taken together, these individual, firm, and system-level practices illustrate how sufficiency is absorbed into existing growth logics. From the multi-level perspective, *less-ish* represents the subversion of sufficiency into growth-compatible initiatives, rather than disruption or transformation. Realising the transformative potential of sufficiency, therefore, requires firms to actively internalise limits across levels, rethinking which, and how many, products and services are offered to consumers, as well as how value is framed. This challenges firms to move beyond growth-compatible operationalisations of sufficiency. Without internalising limits, sufficiency remains vulnerable to rebounds and lock-in effects, sustaining the very consumption-production systems it aims to transform.

Ultimately, firms have a significant role to play in influencing individual and systemic change. Decisions around product design, communication, and sustainability strategies directly influence consumer behaviour and the regulatory environments in which firms operate. Sufficiency will only move beyond *less-ish* marketing appeals if firms internalise limits within their business models, committing to and promoting absolute reductions in production, and by extension, consumption. By shifting from symbolic gestures to absolute reductions in what is produced and consumed, firms can deliver on their promises of fostering systemic transformation.

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Wearing the Repair: Consumer Motivation and Perceptions of Visible and Invisible Mending

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This paper explores the consumer-level product lifespan extension practice of clothing repair, also known as mending. Mending is an anti-consumption practice as it can delay or replace acquisition. Mends can return the product to the former, pristine state (invisible mending) or mends can highlight the fact that a garment has been repaired (visible mending). As marketplace, consumption and mending practices all evolve over time, we focus on current practices, motives, barriers and perceptions around why and how people mend. Key aspects include why mends are made (self and other attributions), by whom (consumer/owner or other, including brands), and desired (in)visibility.

Introduction:

Consumer research has historically focused on acquisition with limited attention on the ownership stage of the consumer journey and even less research has focused on consumer practices of use and care which extend the lifespans of products (Ackermann et al., 2018), including clothing repair, or mending (Diddi & Yan, 2019). Combining forces of overconsumption, loss of skills related to repair, cheap alternatives from fast fashion have all contributed to consumer-level changes in these behavioral patterns. Overconsumption is one of the most pressing societal sustainability concerns and mending can be considered an anti-consumption practice (Cherrier et al., 2011) in that it delays or supplants the need for new purchases (Middleton, 2014). Because this practice has changed over time, this paper contributes to anti-consumption and sustainability research by exploring the current motives, barriers, perceptions and practices related to mending, specifically investigating self vs. other attributions and visible/invisible outcomes. We report one exploratory study herein, and briefly outline further in-progress data collections.

Theoretical Overview

Mending is a post-purchase process that encompasses actions that restore a garment to a wearable state by fixing an issue (Middleton, 2014). Mending is a type of product care

(Ackermann et al., 2018), specifically repair (Godfrey et al., 2022) that leads to the extension of the lifespan (Evans & Cooper, 2010) of the garment. Because mending can displace or delay the acquisition of new products, it should be considered as an anti-consumption practice (Vesterinen & Syrjälä, 2022).

While research in consumer level mending is limited, prior research has touched on stigma, barriers and motivations (Faludi & Füller, 2025). Product attachment is a strong predictor of consumer repair (Chapman, 2015). Of central focus herein is whether a consumer engages in mending themselves or outsources, and whether the mends are visible or invisible to others. Our overarching research questions focus on how consumer-level mending affects relationships with clothing and how motives and perceptions of others' motives influences behaviors and visibility choices of menders, as well as how to encourage more consumers to repair their clothing in order to reverse overconsumption trends in the apparel category.

Method

Study 1 collected qualitative and quantitative exploratory data (n = 155) on people's thoughts and feelings about repair and mending apparel/clothing products. The questionnaire comprised a set of questions on personal self-focused (main and secondary) reasons for and barriers against mending and goals for visible and invisible repair efforts, for both the self and attributions for others. Other questions addressed respondents' feelings about the practice of mending, their mending experiences and intentions, as well as basic socio-demographic information.

Results and Discussion

Qualitative responses were analyzed and coded into seven motives and seven barriers. The most commonly reported reason for mending was related to attachment to the clothing, supporting prior work. However, when thinking of others, consumers report that others most likely mend for financial reasons. When reporting on their own mending barriers, people state apathy but for others, they attribute lack of time, material and skills (see Table 1 for more details).

Table 1. Study 1. Self-Reported Primary Motivation/Barrier for Mending (Frequencies)

Main Motivation	**Examples**	**Self**	**Others**
Attachment	holds memories, really love it, favorite, sentimental value	35.5%	19.4%
Utilitarian	There was a hole, the clothing needed it, torn, stained	18.7%	11.0%
Financial	To save money, it was expensive, it's cheaper	16.1%	27.7%
Simplicity	To prolong use, to not have to buy more, extend the life	9.0%	9.0%
Self-Expression	Aesthetics, personalize, for style, look better, fit better	3.2%	18.1%
Environmental	Reducing waste, sustainability, keep out of landfill	2.6%	3.2%
Enjoyment	Easy skill for me, they enjoy it, for fun	0.6%	3.9%
Other/Combination		14.2%	7.7%
Main Barrier	**Examples**	**Self**	**Others**
Apathy	Too lazy, too much hassle, I no longer like the item, don't care about the clothes, unmotivated	23.4%	14.9%
Lack of Skill/Materials	I don't know how, not talented enough, lack of skill, don't have the materials	22.0%	29.1%
Lack of Time	Time consuming, too much time, lack of time	15.6%	22.0%
Low Perceived Value/Alternative	I can always buy another one, I want to get new clothing	13.5%	12.8%
Item Beyond Repair	Just too far gone, bleached, damage is too great. thrashed	13.5%	0%
Self-Expression	looks ratty, repair would mess it up, not looking new	9.9%	11.3%
Financial	Too expensive to fix, not cost-effective, don't have enough money	5.7%	10.0%
Other/Combination		6.4%	10.0%

Further, respondents reported they preferred their mends to be invisible (vs. visible; see Table 2), perceived moderate difficultly and in general reported high levels of positive feelings and low levels of negative feelings about mending in general. Finally, the sample reported a high instance of ever having a garment mended and were more likely to have mending performed by other vs. self (see Table 2).

Table 2. Study 1. Descriptives, Full Sample

Demographics	
Age (average, range)	20.9, 18-29 years
Gender (female, male, other/prefer not to report)	41.9%, 53.4%, 4.5%
Annual HH Income	
Less than 30k	58.7%
Between 30-50k	8.4%
Between 50-75k	4.5%
Between 75-100k	5.8%
Between 100-150k	9.0%
Over 150k	13.5%
Goals and Difficulty of Mending (7 pt Likert)	
Invisibility of Mend (self / others)	5.13 / 5.12
Visibility of Mends (self / others)	3.20 / 3.51
Perceived Difficultly	3.45
Feelings Towards Practice of Mending (5 pt Likert)	
Sustainable	4.26
Financially-wise	4.07
Self-sufficient	4.06
Happiness	3.37
Pride	3.28
Fashionable	3.23
Frustration	2.56
Embarrassment	1.54
Behaviors	
Ever Mended Yourself (yes/no or not sure)	58.1% / 41.9%
Ever Mended by Other (yes/no or not sure)	84.5% / 15.5%
If clothing needs repair (would mend)	48.4%

Next, behavioral segmentation categorized participants based on four measures of their mending experience and intentions: self-mending experience, having it mended by someone else, mending intentions and mending efforts compared to average other. The sample was divided into two groups: “menders”–those (36.1%) who would mend their clothing, who do so more often than the average other person, both themselves and with help of someone else; and “non-menders”– (63.9%) of respondents who most likely would not mend clothing, who do so less often than the average other person, and whose mending of clothing depend largely on someone else.

To simplify the analysis of variables measuring feelings about the practice of mending, we performed exploratory factor analysis with principal components extraction using varimax rotation. Factor analysis of the 8 items revealed 3 factors with eigenvalues above 1, accounting for almost 70% of the total variance. The first and second factors comprised three items each, respectively covering rational positive feelings (sustainable, financially wise, and sufficiency) and emotional positive feelings (pride, fashionable, and happiness) about the practice of mending. The third factor comprised the remaining two items related to negative feelings: embarrassment and frustration. Scale reliability was good, Cronbach's alpha was 0.77 and 0.73 for Factors 1 and 2. The Spearman-Brown coefficient was 0.50 for the two-item scale used to represent Factor 3. The corrected item-total correlations within each scale were in general high (>0.30), and thus indicative of internal consistency. The items comprising each of ‘feelings’ factors were averaged to compute three composite regression scores that were later used in ANOVA tests.

A third set of calculations were made to compute “self vs. others” differences in visible and invisible mending goals. Thus, four difference items were computed–two for visible, and two for invisible mending such that positive (negative) values indicates that the specific goal is stronger (weaker) for the self versus the average other person.

Next, ANOVA tests were performed to examine differences between the ‘mender’ and ‘non-mender’ behavioral segments on socio-demographic indicators, (self, other people’s, and self-versus-other) goals for visible and invisible mending, as well as respondents’ feelings about the practice of mending (see Table 3).

Table 3. Mean (Standard Deviations) on all Measures by Group			
	‘Mender’ Group (53; 36.1%)	‘Non-mender’ Group (94; 63.9%)	Test Significance
Demographics			
Age	20.8 (*sd* 1.6)	21.0 (*sd* 2.0)	NS
Gender	1.8 (*sd* 0.9)	1.5 (*sd* 0.8)	$F = 6.1$, $p < 0.05$
Household Income	2.3 (*sd* 2.0)	2.4 (*sd* 1.9)	NS
Goals			
Self: Invisible 1	4.6 (*sd* 1.6)	5.2 (*sd* 1.6)	$F = 5.3$, $p < 0.05$
Self: Invisible 2	4.4 (*sd* 1.8)	5.1 (*sd* 1.7)	$F = 5.9$, $p < 0.05$
Self: Visible 3	3.5 (*sd* 1.7)	2.5 (*sd* 1.5)	$F = 12.4$, $p < 0.001$
Self: Visible 4	3.7 (*sd* 1.6)	2.6 (*sd* 1.5)	$F = 16.9$, $p < 0.001$
Self vs. Others Inv 1	–0.7 (sd 1.4)	–0.1 (*sd* 1.5)	$F = 5.6$, $p < 0.05$
Self vs. Others Inv 2	–0.4 (sd 1.9)	0.2 (*sd* 1.8)	$F = 3.8$, $p = 0.054$
Self vs. Others Vis 3	–0.4 (sd 1.6)	–1.0 (*sd* 1.8)	$F = 3.7$, $p = 0.055$
Self vs. Others Vis 4	0.1 (*sd* 1.7)	–0.9 (*sd* 1.7)	$F = 12.2$, $p < 0.001$
Feelings			
+ Pride	3.4 (*sd* 1.1)	3.2 (*sd* 1.2)	NS
+ Fashionable	3.4 (*sd* 1.2)	3.1 (*sd* 1.2)	NS
+ Sustainable	4.5 (*sd* 0.7)	4.2 (*sd* 1.0)	$F = 4.1$, $p < 0.05$
- Embarrassment	1.4 (*sd* 0.7)	1.7 (*sd* 0.8)	$F = 4.6$, $p < 0.05$
+ Happiness	3.7 (*sd* 1.0)	3.2 (*sd* 1.1)	$F = 6.4$, $p < 0.05$
- Frustration	2.4 (*sd* 1.0)	2.7 (*sd* 1.1)	NS
+ Financially_wise	4.1 (*sd* 1.1)	4.1 (*sd* 0.9)	NS
+ Self sufficiency	4.4 (*sd* 0.8)	3.9 (*sd* 1.0)	$F = 7.8$, $p < 0.01$
F1: + rational feelings	0.2 (*sd* 0.8)	–0.1 (sd 1.1)	$F = 3.7$, $p = 0.079$
F2: + emotional feelings	0.2 (*sd* 1.0)	–0.1 (sd 1.0)	NS
F3: - feelings	–0.2 (sd 0.9)	0.2 (*sd* 1.0)	$F = 5.5$, $p < 0.05$

ANOVA tests revealed many significant differences between groups. (1) Sociodemographics: A significant group difference was found on gender, the ‘mender’ group being more likely to be females. Chi-square tests further showed that all respondents reporting a minority gender identity (4 non-binary, 1 trans female, and 1 trans male) are classified to the ‘mender’ group. No significant differences were found on age or household income. (2) Visible and invisible mending goals: Interesting group differences were found on items measuring visible and invisible personal goals. Invisible mending is reported more strongly by ‘non-menders’, whereas visible mending emerges as a more important personal goal of ‘menders’. A consistent, significant pattern was observed on the four ‘self versus the average other person’ difference

measures. Respectively, lower comparative values were observed for invisible and visible mending among 'menders' and 'non-menders'. (3) Feelings: Significant group differences emerged on items measuring positive rational feelings (sustainable and self-sufficiency), positive emotional feelings (happiness), and negative feelings (embarrassment). These differences were supported by ANOVA tests on factors 1 and 3 summarizing positive rational feelings and negative feelings, respectively. This confirmed the hypothesis that mending would elicit more positive and less negative feelings among the smaller group of 'menders.'

Future Directions

Ongoing data collections will build on and extend these findings including survey samples and in depth interviews drawn from two known populations, self-identified visible and invisible menders. This data is being drawn from two social media platforms, Modern Mending Club on Facebook (36.5k+ members) and the r/InvisibleMending subReddit (34K+ members), respectively. We are also completing netnography through social listening around mending practices using searchbuzz and YouScan tools, which all will be completed in the next three months.

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The role of social comparison in the relationship between anti-consumption of clothing and subjective well-being

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Climate change and overconsumption of natural resources are pressing challenges of our time. The clothing industry is among the most carbon-intensive sectors, with overproduction and shortened garment use-times fueling a disposability crisis and increasing emissions ((Howell, 2024; Peters et al., 2021; Quantis, 2018; Statista, 2024). Although greener production methods, circular economy initiatives, and collaborative consumption models have been introduced, the systemic promotion of novelty and rapid turnover continues to drive environmental impact (Atik & Ozdamar Ertekin, 2023; Dissanayake & Pal, 2023). Addressing this requires more transformative approaches such as sustainable anti-consumption of clothing (SACC), which involves reduced acquisition, extended use, and reduced disposal of clothing (Vesterinen & Syrjälä, 2022).

Moreover, Most attempts to influence consumer behavior emphasize altruistic motivations, such as concern for environmental and social well-being (Hur, 2020; Kopplin & Rösch, 2021; Perera et al., 2024; Tewari et al., 2022). Yet these appeals often have limited effect on actual consumption (Herziger et al., 2020). In contrast, research suggests that self-interest is a stronger motivator (Griskevicius et al., 2012). Indeed, sustainable anti-consumption of clothing behaviors, such as minimalism and style-consumption, are often pursued for personal goals such as creativity, individuality, autonomy, and well-being, rather than for environmental reasons (Armstrong & Lang, 2018; Bly et al., 2015; Vladimirova, 2021). These behaviors are also linked to improved consumer subjective well-being (CSWB) including improved life satisfaction, financial security, body image, and reduced depression (Gwozdz et al., 2017; Malik & Ishaq, 2023; Shafqat et al., 2023; Vesterinen et al., 2024). Thus, highlighting self-focused incentives, such as well-being benefits, may be an effective complement to altruistic appeals (Armstrong Soule & Sekhon, 2022; Herziger et al., 2020).

However, the mechanisms behind the well-being benefits of clothing anti-consumption remain underexplored. One promising explanation lies in social comparison processes. According to social comparison theory (Festinger, 1954), individuals drive to define themselves by evaluating their opinions and abilities in comparison to others. The comparison is generally done with others who are either better-off (so-called upward comparisons), or worse-off (so-called downward comparisons), and by either identifying or contrasting with these groups (Buunk & Ybema, 1997). In general, well- being is enhanced when people identify with upward targets or contrast with downward targets, anddiminished in the opposite cases (Buunk &

Dijkstra, 2017).

Clothing consumption plays a central role in identity construction, often leading individuals to compare themselves to shifting cultural ideals of beauty and (Dittmar, 2011). Due to the fashion system's ethos of novelty and variation, these standards are constantly shifting, making them difficult to attain and intensifying the gap between one's actual and ideal self. This perceived discrepancy is linked to dissatisfaction, anxiety, and lower well-being (Dittmar & Halliwell, 2011; Johnson & Attmann, 2009; Shehzala et al., 2024). Indeed, a strong orientation toward fashion, focused on pursuit of the latest trends, is associated with lower subjective well-being than style consumption, which emphasizes enduring personal expression over rapidly changing fashion norm (Gupta et al., 2019; Gwozdz et al., 2017). Anti-consumption practices, by prioritizing prolonged use over acquisition, may reduce exposure to unfavorable upward comparisons and thereby support well-being (Vesterinen et al., 2024).

On the other hand, although voluntary anti-consumers generally report that their lives have become better as a result of consuming less, when the dominant social paradigm encourages continuous acquisition and disposal, also anti-consumers may face difficulties in conforming to the social norms (Boström, 2020; Isenhour, 2010). In particular, although anti-consumers often creatively invent new less acquisition orientated rituals, and ways to cherish their social relations, their choices may cause conflicts and difficult discussions with their acquaintance if they do not share the same goal (Boström, 2020). These conflicts may be mitigated by finding and surrounding themselves with positive role models and reference groups. Therefore, a critical factor in supporting the endeavors of anti-consumers and a factor affecting their well-being seems to be their reference group and the social norms in it (Boström, 2020). In addition, although clothing anti-consumers are often motivated by other benefits than environmental benefits, many are still aware of the devastating environmental effects of over-consumption. Furthermore, pro-social behavior, such as consumption reduction is often connected to some level of climate anxiety (Veijonaho et al., 2025), which can negatively affect the well-being of clothing anti-consumers, even if consumption reduction as such would not have such an effect.

In conclusion, a theoretical model (Figure 1) can be built, where the connection between sustainable anti-consumption of clothing and subjective well-being is partly mediated by upward social comparisons. In addition, this effect is moderated by the social norm in the reference group of the consumer. The connection between SACC and CSWB is also moderated by the level of climate anxiety.

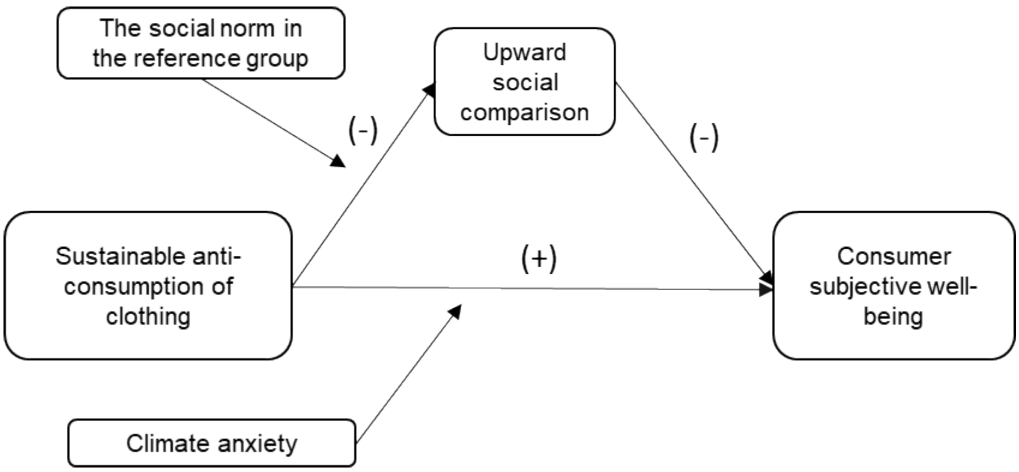

Figure 1. Theoretical framework

This study contributes to sustainable consumption literature by theorizing the multifaceted role of social comparison in the connection between clothing anti-consumption and subjective well-being. It provides insights that can inform strategies for addressing overconsumption and climate change while also promoting consumer well-being. Beyond environmental appeals, interventions could explicitly leverage self-focused motivations. For example, digital pedagogical games could be developed to highlight the psychological and well-being benefits of consuming less. Such games have been shown to engage learners effectively, foster creativity and critical thinking, and provide immediate feedback (Misra et al., 2022).

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Spirituality Increases Autonomy and Reduces Consumption

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Introduction:

Context and Theoretical Background

Spirituality is the engagement to explore—and deeply and meaningfully connect one's inner self—to the known world and Beyond (Kale 2004). Whether observed through a theistic/religious lens or non-theistic/secular lens, spirituality significantly influences 87% of the American population, with 47% identifying as religious and 33% identifying as non-religiously spiritual (Gallup 2023).

Although research has demonstrated the impact of spirituality on the consumer preferences for structure (Cutright 2012), and ethical products (Chowdhury and Fernando 2013), to more specific behavioural changes, including the practice of mindfulness (Gupta et al., 2023) to avoiding conspicuous consumption (Stillman et al, 2012), the underlying mechanisms regarding how and why consumers spirituality constrains or drives consumption remains yet understudied.

Our research, therefore, investigates the journey of spiritual consumers, and aims to undercover the role of spirituality on consumption choices, with a specific interest in the factors that may lead to reduced consumption. Our research is inspired by the premises of self-determination theory (Ryan & Deci 2001), particularly the autonomy construct (Wertenbroch et al. 2020), as a crucial aspect of consumer choice.

Our study addresses the following research questions:

RQ1: How does engaging in a spiritual journey impact consumer decision-making?

RQ2: Why does spirituality lead to reduction or avoidance of consumption?

Method

Based on 26 in-depth interviews (McCracken 1988), we explore spiritual experiences and journeys over the longer term, examining how their spirituality has affected consumption patterns (see Table 1 for participant characteristics). Interview transcripts were coded into five categories using thematic analysis (Joffe 2011). The categories that emerged represent how spirituality contributes to a sense of autonomy, and influences consumption patterns.

Findings

Triggers. Two of the main motivations for individuals to start their spiritual journeys are either through inquisitiveness, or due to personal trauma.

Journey Characteristics. A spiritual journey entails a continuous practice, involving meditation, readings and varied learnings. This practice, intentionally or not, creates the conditions for an increased sense of personal autonomy over time.

Spiritual Experience. As individuals progress in their own spirituality journey, the stronger is the perception of personal autonomy, which is achieved through the connection with their “self”, and their perceived environment. Participants reported a change from decisions based on the short-term future, in favour of a longer-term orientation. Increased personal autonomy finds roots in the perception that the environment is random and ambiguous and cannot be personally controlled, however, they have freedom to choose in a way that aligns with their values and beliefs. Importantly, autonomy differs from control, as defined by Compensatory Control Theory (Kay et. al. 2009) where the belief in religion and a controlling God can serve as an external form of control over randomness.

Impact on Self. We find that the impact of spirituality on the self is activated via autonomy leading to a stronger perception of the self as an active transformative agent – which translated to increased self-awareness and self-appreciation, with some participants making references of becoming their “best selves”. This increased self-awareness and self-appreciation was consistently linked to feelings of inner peace and calmness, having a clear and direct impact on their well-being. Participants reported that as their journey progressed, a noticeable change in consumption patterns occurred, but not led by self-imposed restrictions, but a satisfying sense of autonomy over decisions. This positive emotional component of consumption change was deemed a key component of the spiritual journey - as opposed to the negative feelings of stress and anxiety, often perceived as a consequence of consumption changes that are driven by self-regulation and control. Moreover, the heightened sense of personal autonomy and self-appreciation reflected a reduced need for external validation, directly affecting their choices and consumption patterns.

Impact on Consumption. The increased ability for autonomy impacted participants’ consumption patterns through a growing focus on meaningful consumption that ultimately lead to a reduction or avoidance of consumption. To illustrate, participants described a significant change in how they connect with others via investing in long-term memories and meaningful experiences, as for example gardening or cooking together, and manufacturing homemade items, rather than the purchase of material items and presents for others.

Participants also reported change in consumption patterns facilitating renewal, repairing or healing themselves by abstained from sugar or meat, resulting in the avoidance of consuming foods considered harmful to themselves, and/ or the environment.

The practice of spirituality supported both intellectual and pragmatic growth , as participants reported their self-awareness and purpose (Steger, 2012) to stimulated reflection on the meaning driving consumption decisions. This involved mindfully exploring the need for purchase, or focusing on how they might satisfy a need in a more harmonious or sustainable way.

As a consequence, the practice of spirituality, provided participants with an increased autonomy and self-awareness, enriching their own self-understanding through their consumption decisions and experiences. Moreover, how consumption supports – or not – the type of person they wished to be. This not only resulted in an avoidance of consumption, but the development of a more automatic decision-making process, which required lower cognitive load, impacting on an improved sense of wellbeing (Ryff, 1989).

Contributions

This study is the first to unpack how sense of personal autonomy can be included as an underlying mechanism of the spiritual journey understanding of NTS dimensions in consumption settings, addressing RQ1. It extends understanding of how autonomy permeates the spiritual journey, from unconscious triggers to automatic daily decision-making logic.

Constructs like self-awareness and autonomy offer tangible perspectives on spirituality's impact on consumer choice, addressing RQ2.

The spiritual journey employs self-awareness through aligned consumption choices and enhances autonomy in life management and informed decision-making.

Next studies: It is predicted that the spiritual journey and the sense of autonomy empower consumers for to be in charge of decision-making, which will be tested in the next stage of our research project.

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Appendix.

Table 1 - Participants characteristics

Participant	Age (years)	Gender	Family Type	Cultural Background
P1	60	Male	Married/Children	Western
P2	29	Male	Single	Western
P3	56	Female	Married/Children	Western
P4	39	Female	Married/Children	South Asian
P5	46	Female	Married/Children	Western
P6	42	Female	Married/Children	Western
P7	63	Female	Married/No Children	Western
P8	35	Male	Married/ No Children	Latin American
P9	34	Female	Married/ No Children	Latin American
P10	38	Female	Married/ No Children	Latin American
P11	23	Male	Single	Latin American
P12	49	Male	Married/Children	Western
P13	43	Female	Married/Children	Western
P14	34	Male	Married/Children	South Asian
P15	42	Female	Married/No Children	Latin American
P16	71	Female	Married/ No Children	Western
P17	47	Male	Divorced/ No Children	Western
P18	68	Male	Divorced/Children	Western
P19	74	Female	Divorced/Children	South East Asian
P20	57	Female	Single	Western
P21	82	Male	Married/Children	Western
P22	57	Male	Married/Children	Western
P23	58	Female	Single	Western
P24	47	Female	Married/Children	Western
P25	73	Male	Married/Children	Western
P26	70	Male	Married/No Children	Western

The Impact of Frugality on Loyalty Program Usage

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Frugality is defined by "the degree to which consumers are both restrained in acquiring and resourceful in using economic goods and services to achieve longer-term goals" (Lastovicka et al., 1999). Frugal consumers tend to exhibit two core characteristics. First, they prioritize long-term benefits and avoid compulsive buying behaviors. Second, they aim to maximize the utility of their possessions and financial resources. These characteristics do not exclude frugal consumers from the marketplace; rather, they adapt their behavior to "do more with less" (Nepomuceno & Laroche, 2017). Importantly, frugal consumers differ from "tightwads"—they do not dislike spending per se but instead take pleasure in saving (Goldsmith et al., 2014), this distinction positions them as promising candidates for loyalty program usage.

Loyalty programs are strategically important for brands. A 5% increase in customer retention can boost profits by 25% to 95% (Alshurideh et al., 2020). Their success largely depends on meeting the needs and preferences of their audience (Alshurideh, 2013; Danaher et al., 2020) but also in investigating effort in valuable consumer (Yi & Jeon, 2003). While frugal consumers may seem like ideal candidates for such programs, they present a paradox in terms of program participation. They are likely motivated by the advantages such programs offer (e.g., discounts, free products) (Goldsmith et al., 2014) yet they may hesitate to engage in the very process required to access them—spending. This study aims to better understand how frugality influences loyalty program usage, particularly in terms of point accumulation and redemption behaviors.

To address this question, we conducted a field study within one of the largest airlines in North America. In this program, consumers accumulate points through flight bookings or affiliated credit card purchases and can redeemed these points for products (e.g., flight bookings, merchandise from partners) or services (e.g., class upgrades). This program encompasses diverse consumption categories, used for hedonic (leisure) or utilitarian (work) purposes, and for oneself, family, or friends. Such plurality provides rich insights into loyalty program usage, which varies by product category or context (Yi & Jeon, 2003). Our dataset combined real behavioral data from loyalty program usage with psychometric data collected via survey. This allowed us to assess not only the total quantity of points accumulated and redeemed but also the frequency of accumulation and redemption events. This dual approach offers a more nuanced understanding of frugal consumer behavior in the context of loyalty program usage.

From frugality definition and previous research (Bove et al., 2009; Goldsmith et al., 2014) we derive three hypotheses. First, because frugal consumers limit their purchases and involve in voluntary restrained consumption (Bove et al., 2009), we expect them to accumulate fewer loyalty points than non-frugal consumers (H1). Second, due to lower number of accumulated points, we also expect them to redeem fewer points overall (H2).

However, despite lower levels of consumption—and thus fewer points accumulated and redeemed—frugal consumers still participate in the marketplace. Given their enjoyment of saving and their tendency to protect monetary resources (Goldsmith et al., 2014; Suárez et al., 2020), we expect them to engage in behaviors that maximize the preservation of those resources whenever possible (Kapitan et al., 2021). We anticipate that frugal consumers will seek to preserve their monetary resources by leveraging non-monetary resources—such as loyalty program points—to obtain benefits. Formally, we hypothesize that the proportion of redemptions relative to accumulations will be higher for frugal consumers than for non-frugal consumers (H3).

A total of 6,274 members of the loyalty program (M_{age}=52.79, SD=16.7) participated by completing the frugality scale (Lastovicka et al., 1999) and other psychometric measures that fall outside the scope of this study. For each participant, we also gathered two years of program data, including the number of points accumulated and redeemed, as well as the number of point-related transactions, allowing us to calculate a usage ratio (Usage ratio = Number of redemption events / Number of accumulation events).

A linear regression revealed that participants with higher frugality scores accumulated fewer points (β=-0.118; p<0.001). Notably, frugal consumers accumulate fewer points both through flight bookings (β=-0.136; p<0.001) and through affiliated credit card usage—that is, through their everyday consumption (β=-0.128; p<0.001). These results confirm the negative impact of frugality on overall consumption, as previously suggested by Goldsmith et al. (2014). Regarding point redemption, frugal consumers redeemed fewer points overall (β=-0.106; p<0.001) than their less frugal counterparts. Specifically, they were less likely to redeem points for flight bookings (β=-0.137; p<0.001). However, no significant effect was observed for point redemptions on non-travel products, such as merchandise from brand partners.

The usage ratio for frugal consumers is higher, indicating that the proportion of redemptions relative to accumulations is greater (β=0.052; p=0.05). This suggests that frugal consumers redeem points more frequently than they accumulate them—regardless of the total quantity of points involved. These results support all three hypotheses and highlight that while frugality reduces the overall volume of point transactions, it increases the frequency with which points are used to access program benefits, thereby helping consumers preserve their monetary resources (Rick et al., 2008).

This research confirms with real-word behavioral data that frugality reduces consumption (i.e., via credit card usage). It also highlights that an anti-consumption lifestyle—specifically, frugality—does not inherently inhibit loyalty programs usage. Instead, it alters how consumers interact with them. Moreover, our findings suggest that frugal consumers do not mentally account for loyalty points in the same way they do for money (Thaler, 1990); they are willing to spend the former to preserve the latter.

These insights offer practical implications for loyalty program design. Programs could be more appealing to frugal consumers if they enable frequent redemptions with small amounts of points. Future research could further investigate the psychological mechanisms underlying these behaviors. We suggest examining whether environmental concern mediates the relationship between frugality and loyalty program use, as frugal consumers often aim to conserve both financial and environmental resources (Suárez et al., 2020) and may therefore prefer using points to lower the cost of planned purchases rather than buying additional merchandise.

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Anti-Consumption for Social Equity: Exploring Maladaptive Behaviors and Community-Led Solutions

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Introduction:

Maladaptive consumption, defined as self- and other-harming, uncontrollable consumer behavior triggered by internal or external cues (Reimann & Jain, 2021). It remains a pressing issue in socio-economically disadvantaged contexts. Behaviors such as habitual alcohol, tobacco, and vaping use are often framed as individual choices, yet they are profoundly shaped by structural, cultural, and psychological conditions (Martin & Stewart, 2024). This research examined patterns and predictors of maladaptive consumption across disadvantaged populations, with particular attention to Indigenous and low-income communities, and evaluated the potential of community-led interventions to reduce harmful consumption and improve well-being.

Study 1: Maladaptive Consumption by Ethnicity

A longitudinal analysis was conducted using health survey data from 2013, 2018, and 2023. The sample focused on households below the B40 income threshold (monthly gross income under RM 5,250/USD 1,250), with attention to Indigenous populations. Variables included loneliness, quality of life (QOL) across four domains, smoking, drinking, vaping, and demographic factors.

Findings revealed that smoking increased between 2013 and 2018, followed by a decline in 2023, coinciding with the introduction of vaping measures, which showed significant uptake. Alcohol consumption rose in some communities. Smoking rates were consistently higher among Indigenous participants. Notably, smoking and alcohol use were negatively associated with QOL, while healthy behaviors such as fruit consumption showed positive effects.

These results align with Roche et al. (2015) and Shortt et al. (2018), underscoring how socio-economic disadvantage amplifies both the prevalence and harms of maladaptive consumption, particularly in contexts with dense availability of harmful products. Preliminary evidence also suggests that Indigenous individuals in low-income brackets may face compounded vulnerabilities.

Study 2: Community-Led Intervention and Behavioral Outcomes

A quasi-experimental study was conducted with 400 respondents from low-income backgrounds, divided into four groups: (1) NGO staff and volunteers, (2) villagers engaged with the NGO for more than 10 years, (3) villagers engaged for less than 5 years, and (4) control villagers with no NGO presence.

Results showed smoking and alcohol consumption were highest in control villages and lowest among NGO staff and volunteers. In control communities, smoking significantly reduced QOL, whereas in NGO-engaged groups, this negative effect was attenuated. These findings highlight the protective role of long-term, peer-supported, and culturally sensitive interventions, which often fail to resonate with conventional top-down health campaigns.

Discussion:

Maladaptive consumption in disadvantaged communities can be reframed as a coping mechanism for chronic stress, exclusion, and structural inequality, rather than as an indication of individual moral weakness (Reimann & Jain, 2021). Our findings suggest that anti-consumption strategies, such as reducing, refusing, or redirection of harmful consumption, can improve well-being when embedded in culturally grounded, community-driven approaches.

Implications:

This research contributes to the anti-consumption literature by:

1. Demonstrating the importance of longitudinal data in identifying persistent vulnerabilities and resilience factors.
2. Providing empirical evidence for the effectiveness of grassroots, community-led interventions.
3. Reframing anti-consumption as a form of collective resistance to exploitative market practices.

By centring Indigenous communities and disadvantaged men and women, the study employs an intersectional lens that recognises the interplay of ethnicity, gender, and class in shaping consumer vulnerability.

Conclusion:

This research provides robust support for anti-consumption strategies as a pathway to social equity. Maladaptive consumption emerges as a rational response to adversity, not a psychological failing. Sustainable interventions require moving beyond individual behaviour change toward empowering, community-led solutions. The findings provide actionable insights for scholars, policymakers, and practitioners committed to addressing systemic inequalities while promoting public health and well-being.

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Behavioral Determinants of Sustainable Investing: Exploring the Role of the Theory of Planned Behavior, Financial Literacy, and Behavioral Biases among Gen Z and Millennials

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Introduction:

The increasing concern for environmental sustainability has led investors to seek sustainable investment opportunities (Baker & Nofsinger, 2012). Among investors who seem to be leading this charge are Gen Z and Millennials who demonstrate a heightened awareness of their social responsibility efforts and believe that their investment can create positive change (Formánková et al., 2019). This study examines how behavioral factors (attitude, subjective norms, and perceived behavioral control) , financial literacy, and behavioral biases affect young adults' intentions to engage in sustainable investing. Specifically, this research investigates the factors that predict the intention to invest sustainably among Gen Z and millennials, offering insights for financial institutions seeking to promote responsible investment within these generations.

Background

The theory of planned behavior (TPB) (Ajzen, 1985) is widely recognized as a foundational framework for examining sustainable consumer behavior (Alzubaidi et al., 2021; Dangelico et al., 2021; Oehman et al., 2022; Sheoran & Kumar, 2021; Yadav & Pathak, 2017). According to TPB, a person's intention to engage in a behavior is influenced by three key factors: their attitude toward the behavior, the social pressure they perceive from others (subjective norm), and their sense of control over performing the behavior (perceived behavioral control).

Moreover, financial literacy which is defined as the knowledge and skills needed to make informed financial decisions (Lusardi & Mitchell, 2011) is another factor potentially impacting sustainable investment behavior. Higher financial literacy levels are often associated with better financial planning and decision-making, as financially literate individuals are more likely to understand and consider the risks and benefits of different investment options (Klapper et al., 2015). When it comes to sustainable investing, there seems to be a positive relationship between financial literacy levels and various indicators of sustainable investing (Senaya, 2024).

Lastly, the behavioral finance literature highlights several behavioral biases (often referred to as "cognitive errors") that can significantly impact investment decisions. These biases stem from limitations in human cognition, where investors rely on mental shortcuts or heuristics rather than rational analysis when making financial decisions. Such cognitive errors frequently arise from the difficulty in accurately predicting future market trends, leading investors to make decisions that deviate from purely rational or profit-maximizing behavior (Toma, 2015).

Methodology

This study surveyed a sample of 333 participants to explore the impact of TPB variables, financial literacy, and behavioral biases on sustainable investment intentions. The sample was composed of 59% male and 41% female participants, with ages ranging from 19 to 43 ($M = 31.64$, $SD = 6.63$). Participants represented two generational cohorts, with Millennials comprising 71% of the sample and Gen Z the remaining 29%.

Data were collected through an online questionnaire, which included measures for the theory of planned behavior (TPB) variables, alongside financial literacy and seven cognitive biases (herding, overconfidence, anchoring, representativeness, familiarity, disposition effect, and mental accounting).

Multiple linear regression were conducted to evaluate the predictive effects of each TPB variable, financial literacy, and behavioral biases on participants' intentions to invest sustainably.

Results and Discussion

The results of the multiple linear regression analysis provide insight into the factors influencing young adults' intentions to invest sustainably. Among the theory of planned behavior (TPB) variables, Attitude ($\beta = 0.608$, $p < .001$) and Subjective Norm (SN) ($\beta = 0.245$, $p < .001$) were significant predictors, indicating that individuals with a favorable view of sustainable investing and those who perceive social support for this behavior are more likely to intend to invest sustainably. However, Perceived Behavioral Control (PBC) did not show a significant effect ($p = 0.839$), suggesting that the perception of control over sustainable investing may not play a substantial role in shaping intentions among this demographic.

Regarding behavioral biases, Representativeness ($\beta = 0.112$, $p = 0.003$) was a significant positive predictor, implying that participants who exhibit the representativeness bias may be more inclined to engage in sustainable investing. Interestingly, Herding showed a marginally significant negative effect ($\beta = -0.063$, $p = 0.050$), indicating that those susceptible to following the actions of others might actually be less inclined toward sustainable investment. Other biases, including Anchoring, Familiarity, Overconfidence, Mental Accounting, and Disposition, did not demonstrate significant impacts on sustainable investment intentions.

Finally, Financial Literacy showed a significant negative effect on sustainable investment intention (β =-0.070, $p = 0.004$), which is unexpected. This result suggests that higher financial literacy may be associated with lower sustainable investment intentions among young adults. This finding could indicate that financially literate individuals may view sustainable investments as potentially riskier or less financially beneficial, perhaps opting instead for traditional investment options.

Conclusions and Implications for Theory and Practice

This study extends the theory of planned behavior by demonstrating that attitude and social norms significantly shape young adults' sustainable investment intentions. However, financial literacy’s negative impact and the mixed results for behavioral biases suggest that younger investors’ decisions may be more complex and context-dependent than previously thought.

For financial institutions, these findings suggest a need to prioritize attitudinal and social approaches to promote sustainable investment. Marketing strategies that emphasize the ethical and socially supported nature of sustainable investments may be more effective than educational campaigns focused on financial literacy.

Future research could explore the underlying reasons for the negative relationship between financial literacy and sustainable investment intentions, potentially examining whether certain aspects of financial literacy (e.g., risk assessment) discourage sustainable investment. Further studies might also investigate the role of demographic factors as well as potential variations between Gen Z and Millennials to develop more tailored approaches to young investors.

References available upon request.

Sustaining Digital Engagement with Recycling Apps: The Impact of Infrastructural support

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Introduction:

Amid ecological limits, global waste continues to rise, with over 90% mismanaged in low-income countries and plastic waste projected to triple by 2060 (Kaza et al., 2018; Fleck, 2022). In response, recycling apps have emerged, using gamification and rewards to encourage responsible disposal/recycling (Behnamifard et al., 2021; Hsu and Chen, 2021). Recycling apps are digital tools that connect households, collectors, and recycling companies by scheduling waste collection at users' preferred times directly from their doorstep to the recycling companies (Behnamifard et al., 2021), a system also implemented in Indonesia. However, user retention in apps remains low, with only 40% active after two weeks and over 93% abandoning apps within 30 days (De Wildt & Meijers, 2023; Ceci, 2021; Iqbal, 2019). Insights from health apps show that social incentives, such as encouragement and community support, can foster lasting habits (Berry et al., 2023) which are needed to achieve long-term app use and desired behavioural changes.

Most recycling app studies overlook behavioural, environmental, and cultural factors. The present study addresses this gap by combining technology adoption theories, Hofstede's cultural dimensions, and the Comprehensive Action Determination Model (Klöckner & Blobaum, 2010). Further, it examines how infrastructural support, design constraints, and perceived app quality influence continuance intention, and how cultural orientation (individualism vs. collectivism) moderates these effects.

Theoretical background:

Infrastructural support such as sufficient facilitation, reliable infrastructure, and responsive IT support plays a critical role in shaping user experience. When users have access to services like convenient waste pick-up (facilitation), clear drop-off locations (infrastructure), and prompt digital support (IT), they are more likely to continue using the app (Venkatesh et al., 2003; Sahoo et al., 2022; Poromatikul et al., 2020). In contrast, design-related issues such as app complexity, poor navigation, or low user-friendliness can act as barriers that discourage continued use. These design constraints may lead to rejection behavior, a form of anti-consumption where users avoid tools that fail to meet their needs (Ghasemaghaei, 2020; Pal et al., 2021; Lee et al., 2011). Users also compare the perceived quality of their current app with available alternatives. If competitors offer better features or overall value, they may choose to switch (Yuan et al., 2019; Foroughi et al., 2024). Cultural orientation further shapes user behavior. Individualists tend to seek convenience and personal benefit, while collectivists respond more to community-oriented features and shared goals (Hofstede, 2001; Sabiote et al., 2012). Based on this foundation, six hypotheses are proposed. Figure 1 presents the conceptual model.

H1: Infrastructural support (e.g., facilitation, infrastructure, policy, IT support) positively impact intention to continue using the recycling app.

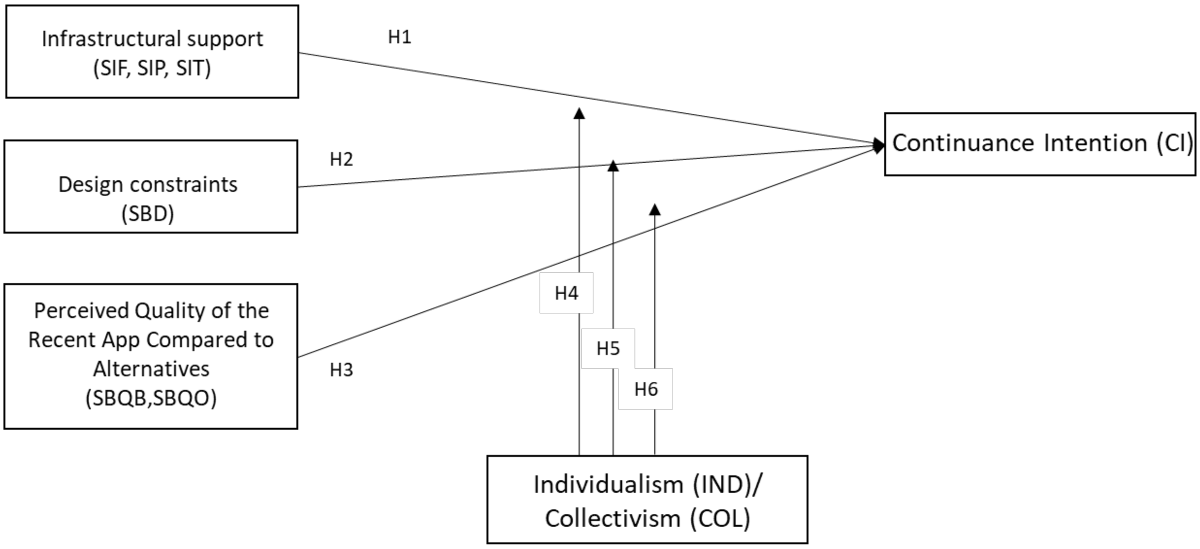
H2: Design constraints negatively impact continuance intention.

H3: Perceived quality of the recent app compared to alternatives positively impacts continuance intention.

H4: Individualism/collectivism moderates the relationship between Infrastructural support and continuance intention, with the relationship being stronger among collectivist users.

H5: Individualism/collectivism moderates the relationship between design constraints and continuance intention, such that the negative effect is weaker among collectivist users.

H6: Individualism/collectivism moderates the relationship between perceived quality and continuance intention, with the relationship being more pronounced among individualist users



Note:
SIF = "Facilitation"; SIP = "Public Infrastructure & gov. policy"; SIT = "Technical IT support"; SBD = "Design constraints (Product Barriers)"; SBQB= "Perceived Quality of the Recent App Compared to Conventional Alternatives"; SBQO = "Perceived Quality of the Recent App Compared to Alternative Apps".

Methodology:

This study used a cross-sectional, web-based survey of Indonesian recycling app users aged 20 and above with at least three months of usage. To ensure specific responses, participants had to be using one of ten recycling apps, which were selected based on 1) their availability on Android and iOS (Ventola, 2014), 2) clear descriptions, and 3) free access to encourage participation (Al-Shamaileh & Sutcliffe, 2023). Participants were recruited via Qualtrics and reached through WhatsApp groups, Facebook communities, app user databases, and the Jakpat platform. Demographics are shown in Table 1.

Table 1. Demographics of Respondents (N= 951)

Category		Frequency	%
Gender	Male	482	50.7
	Female	469	49.3
Age	18-25	275	28.9
	26-35	399	42
	36-45	224	23.6
	46-55	47	4.9
	Above 55	6	0.6
Educational Background	Non-Formal Education	3	0.3
	Primary School	4	0.4
	Secondary School	354	37.2
	Diploma	70	7.4
	Bachelor's Degree	478	50.3
	Master's Degree	37	3.9
	Doctoral (PhD)	5	0.5
Average monthly expenditure	Less than Rp 354,000	28	2.9
	Rp 354,000 - Rp 532,000	86	9
	Rp 532,000 - Rp 1,200,000	198	20.8
	Rp 1,200,000 - 6,000,000	517	54.4
	More than IDR 6,000,000	122	12.8
App usage duration	More than three months	695	73.1
	Exactly three months	256	26.9

All answers were captured five-point Likert scales and questions were adapted from established sources: continuance intention (Lee, 2009; Bhattacherjee, 2001), facilitation (Huang & Nan, 2023), public infrastructure, gov. policy & technical IT support(Liao et al., 2018; Venkatesh et al., 2003), design constraints (Pal et al., 2021), perceived app quality compared to alternatives (Yuan et al., 2019), and individualism/collectivism (Fatehi et al., 2020). The survey items used in this research are presented in Table 2 below. Data were analysed using PLS-SEM in SmartPLS4.

Table 2. Survey Items

Constructs	Items	Sources
Continuance Intention	1. "I intend to frequently continue using the recycling app rather than discontinue its use in the near future". 2. "My intentions are to continue using this recycling app than use any alternative means (traditional recycling methods)" 3. "It will be worth using this recycling app again in the future" 4. "I would be willing to recommend other people to use this recycling app" 5. "If I could, I would like to discontinue my use of this recycling app" (reverse coded).	Lee (2009); Bhattacherjee (2001)
Infrastructural Support	Facilitation (SIF): 1. The app company offers several choices of waste collecting service (pick-up service or drop-off service). 2. The app company has many drop-off points and pick-up services in many places. 3. Waste drop-off point locations are reasonably located and easy to find 4. The waste collector staff is easy to find and responsive to my needs	Huang & Nan (2023)
	Public Infrastructure & gov. policy (SIP): 1. "The separation facilities (bins, waste collection pools) provided by the government are sufficient to facilitate waste separation" 2. "The government provides clear guidelines and examples on separation" 3. "The government's promotion clearly explains the benefits of separation"	Liao et al. (2018) as cited in Chen and Lee (2020)
	Technical IT support (SIT): 1. A specific person (or group) is available and quick to assist me with system difficulties 2. Specialized instruction or custom solution concerning the system's problem is available to me 3. Guidance and information regarding waste classification, waste pick-up service and waste drop-off location are available to me in the selection of the system	Venkatesh et al (2003)
Design constraints (SBD):	It's hard for me to use recycle apps because: 1. "The app's design and appearance make it difficult to operate" 2. "The app often freezes or malfunctions" 3. "Some features provided by the app are not sufficient for my needs" (e.g. the waste pick-up service)	Pal et al. (2021)

Perceived Quality of the recent app compared to Alternatives	Perceived Quality of the recent app compared to traditional waste bank service (SBQB): 1. Compared with the traditional waste bank service for collecting segregated waste, you feel that: a. This recycling app is more appealing. b. This recycling app has better services and more benefits. c. This recycling app is closer to being ideal. Perceived Quality of the recent app compared to other recycling apps (SBQO): 2. Compared with other recycling apps you have used before, you feel that: a. This recycling app is more appealing. b. This recycling app has better services and more benefits. c. This recycling app is closer to being ideal.	Yuan et al. (2019)
Individualism/ Collectivism	Individualism: 1. “I would rather depend on myself than others.” 2. “I rely on myself most of the time; I rarely rely on others.” 3. “My personal identity, independent of others, is very important to me.” 4. “I prefer to be direct when discussing with people.”	Fatehi et al., (2020).

Findings:

This study confirms that infrastructural support positively influences continuance intention (H1), highlighting its universal role in sustaining engagement with recycling apps. Design constraints negatively affect continued use (H2), emphasising the need for user-friendly, well-designed apps. Perceived app quality also boosts continuance intention (H3), showing that users prefer apps they see as superior. Cultural values did not moderate the effect of infrastructural support (rejecting H4), but did influence other relationships: collectivists were more tolerant of design flaws (supporting H5), while individualists were more affected by app quality (supporting H6). These insights stress the importance of design, value, and cultural fit.

Implications, limitations, future research and conclusion:

Before this study, little was known about sustaining user engagement with green technologies like recycling apps by integrating green behavior, technology adoption, and continuance intention research. Existing models emphasized personal norms, system quality, or design barriers but overlooked infrastructural support and environmental motivations. This study is the first to unify infrastructural support and barriers from all three domains into a single model.

It confirms that infrastructural support increases continuance intention (H1), while design constraints reduce it (H2), and perceived quality strengthens it (H3). Additionally, cultural relevance plays a moderating role (H5 and H6), influencing how users respond to design limitations and perceived app quality. These moderating role findings relate to the concept of individual autonomy discussed by Henry (2010), which is closely tied to self-reliance, personal responsibility, and self-efficacy, influenced by internal factors such as free choice and control, and external factors like social equality and fairness. However, cross-sectional, self-reported data limit causal conclusions, and the focus on individualism/collectivism and recycling apps may reduce generalizability. These findings help app developers and policymakers design more effective, sustainable tools. Marketing should shift from encouraging more consumption to enabling sustained, responsible use. Future research should explore broader cultural factors, use longitudinal designs, and compare app categories to strengthen insights into sustainable digital engagement.

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Empowering Vulnerable Consumers: BANBR, A Personalized, Budget-Aware Recommender System for Grocery Shopping

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The global deterioration of diet quality and rising economic inequalities underscore the urgent need for tools and marketing practices that empower vulnerable consumers. Financial vulnerability, characterized by limited access to financial resources and constraints in managing these resources effectively, significantly impacts consumers' purchasing decisions, especially in essential contexts like grocery shopping. In Canada, recent reports from the Financial Consumer Agency of Canada (FCAC, 2024) highlight that 32% of Canadians borrowed money to cover daily expenses. This percentage goes up to 45% for the indigenous communities, and 39% for recent immigrants. Consumers experiencing difficulties in making ends meet amplifies their financial vulnerability and exacerbates their poor dietary choices linked to chronic health conditions, such as diabetes and cardiovascular conditions, posing profound health challenges globally.

Indeed, grocery shopping is especially challenging for financially vulnerable consumers due to high price sensitivity, budget variability, and overwhelming product choices. This complexity exacerbates consumer vulnerability, leading to suboptimal decision-making and perpetuating adverse health outcomes and economic inequalities.

In response, our study introduces the Budget-Aware Next Basket Recommendation (BANBR) system, an AI-driven recommender tool explicitly designed to empower financially vulnerable consumers. By integrating individual preferences with realistic and dynamic budget constraints, BANBR aims to facilitate responsible and sufficient consumption practices, thus contributing meaningfully to debates on anti-consumption, responsible consumption, and sufficiency. Unlike traditional recommender systems, which prioritize consumer preferences and satisfaction but neglect essential financial realities, BANBR explicitly acknowledges consumers' fluid financial boundaries and incorporates flexible budget constraints into its recommendation algorithm.

Consumer vulnerability is understood theoretically as a dynamic and situational state, shaped by personal resource limitations, lack of control over these resources, and constrained consumption choices (Hill & Sharma, 2020; Salisbury et al., 2023). BANBR addresses these theoretical constructs by explicitly incorporating the principles of bounded rationality (Simon, 1955) and choice overload (Iyengar & Lepper, 2000), reflecting how vulnerable consumers navigate grocery shopping decisions. Our model particularly highlights resource scarcity's detrimental impact on consumer decision-making capabilities, aligning closely with theories emphasizing scarcity's cognitive load and decision fatigue (Mullainathan & Shafir, 2013).

The BANBR system employs a two-stage recommendation approach. First, the Dual Item Retrieval stage identifies candidate items by combining personalized item frequency with basket-level self-attention mechanisms. This integration effectively captures consumer behavior in repeated and novel item exploration contexts. Second, the Budget-Aware Basket Optimization stage selects optimal product combinations within soft budget constraints. This method significantly differs from traditional rigid budget approaches, providing a realistic and flexible framework reflective of actual consumer spending patterns, crucial for addressing vulnerable consumers' real-world constraints.

We validated BANBR’s efficacy through comprehensive empirical testing using both public datasets (Dunnhumby Carbo-Loading dataset) and proprietary loyalty datasets from major North American grocery retailers. In these experiments, BANBR consistently outperformed existing state-of-the-art recommender systems across essential performance metrics such as Recall@|B| and NDCG@|B|. For instance, BANBR improved recommendation accuracy significantly on the Dunnhumby dataset, achieving Recall@|B| scores of 0.2116 and 0.2164 and NDCG@|B| scores of 0.2176 and 0.2231, respectively, substantially outperforming traditional models. Results from the proprietary loyalty datasets similarly confirmed BANBR’s robustness and practical applicability in addressing consumers' actual financial constraints and preferences. Our case studies further showcase BANBR’s real-world value. For example, a detailed analysis of a consumer's basket optimization revealed that BANBR substantially reduced recommended basket costs, from an initial $27.66 to $19.69, bringing it much closer to the consumer’s actual budget and significantly improving recommendation accuracy. Such practical applications highlight BANBR’s potential to drive meaningful change in consumer purchasing behavior, aligning with principles of responsible and sufficient consumption.

Theoretical contributions of this research are multifold. By explicitly integrating flexible budget constraints, our study expands the conceptual understanding of consumer vulnerability and the role marketing plays in either exacerbating or alleviating consumer disadvantage. It directly responds to recent scholarly calls for marketing interventions designed for social good and consumer welfare, positioning AI-driven tools like BANBR as critical to fostering responsible consumption within sustainable economic models. Moreover, BANBR aligns closely with marketing's role in promoting responsible consumption and sufficiency, offering empirical support for transformative marketing practices that move beyond traditional growth-centric frameworks. Methodologically, BANBR introduces significant innovations, particularly through the development and validation of soft budget constraints within recommender systems. The proposed two-stage approach, combining personalized consumer preferences with budget-conscious recommendations, addresses a critical gap in existing recommender system methodologies. It demonstrates clear empirical advantages over rigid budget methodologies, thus offering a replicable framework for future research and practice.

Implications for marketing practice and policy are substantial. Retailers adopting BANBR-like systems can enhance consumer loyalty and satisfaction by offering personalized yet financially realistic product recommendations, significantly aiding vulnerable consumers. Policymakers and social organizations could leverage BANBR to enhance digital platforms associated with government assistance programs, fostering greater nutritional and financial well-being among beneficiaries. Individual consumers engaged in responsible and/or anticonsumption and sufficiency efforts may define the budgetary constraint they want to operate into for easier everyday life integration. While this research primarily considers budgetary constraints, we acknowledge broader limitations, particularly regarding additional factors such as health and nutritional needs.Future research directions include expanding the BANBR system to incorporate additional practical constraints such as nutritional and dietary guidelines and integrating adaptive learning features that continuously refine recommendations based on evolving consumer needs and market conditions. Such enhancements should support financially vulnerable consumers, addressing broader health and financial sustainability goals.

In summary, our study advances the understanding of marketing's potential to support financially vulnerable consumers through innovative, practical, and theoretically grounded approaches. By introducing BANBR, a personalized and financially-aware recommender system, we offer a tangible pathway toward enhanced financial inclusion, responsible consumption, and sustainable economic practices, directly aligning with broader societal imperatives for equitable consumer empowerment.

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Table 1: Summary of evaluation datasets. The repeat ratio is computed as the proportion of items in a user's test basket that had appeared in their previous baskets

Statistics	Loyalty-1	Loyalty-2	Loyalty-3	Dunnhumby-1	Dunnhumby-2
# Users	32,048	28,813	33,354	43,064	46,305
# Items	3,736	3,772	3,898	737	703
# Baskets	399,702	358,364	418,226	663,864	719,179
# Interactions	1,064,145	922,266	1,073,754	1,078,229	1,181,259
Avg. # items per basket	2.66	2.57	2.57	1.62	1.64
Avg. # baskets per user	12.47	12.44	12.54	15.42	15.53
Avg. repeat ratio	0.37	0.37	0.40	0.53	0.55
Avg. cost per basket ($)	8.76	8.52	8.62	2.65	2.51

Table 2: Performance comparison on five datasets. The best results are in boldface and the best baseline results are underlined. Nearest Neighbor Rounding is used to generate approximate budgets for BABODIR, with the interval set to five units.

Method	Loyalty-1 Recall	Loyalty-1 NDCG	Loyalty-2 Recall	Loyalty-2 NDCG	Loyalty-3 Recall	Loyalty-3 NDCG	Dunnhumby-1 Recall	Dunnhumby-1 NDCG	Dunnhumby-2 Recall	Dunnhumby-2 NDCG
G-POP	0.0291	0.0328	0.0325	0.0372	0.0347	0.0401	0.03	0.0305	0.0338	0.0343
P-POP	0.1373	0.1496	0.1416	0.1529	0.1517	0.1634	0.197	0.203	0.204	0.2107
GP-POP	0.1402	0.1522	0.145	0.1562	0.1557	0.1672	0.1989	0.2045	0.2059	0.2123
FPMC	0.1102	0.1185	0.1145	0.1225	0.1214	0.1292	0.1835	0.1885	0.1904	0.1953
DREAM	0.0903	0.1001	0.1021	0.1118	0.1131	0.1236	0.1787	0.1845	0.1837	0.1902
LightGCN	0.1357	0.1469	0.1404	0.1515	0.1507	0.1616	0.1961	0.2016	0.2032	0.2094
TIFUKNN	0.1406	0.1526	0.1451	0.1564	0.1559	0.1673	0.1992	0.205	0.2063	0.2127
ReCANet	0.1476	0.16	0.151	0.1621	0.1629	0.1749	0.1977	0.2039	0.2054	0.2122
SFCNTSP	0.1377	0.1506	0.1432	0.1553	0.1552	0.1671	0.1918	0.1981	0.2004	0.2075
DIR	0.1452	0.1575	0.1488	0.1602	0.1606	0.1723	0.2008	0.2065	0.2078	0.2143
BABODIR-H	0.149	0.161	0.1537	0.1648	0.1653	0.177	0.2019	0.2075	0.2087	0.2151
BABODIR-O	0.1489	0.1611	0.1527	0.1641	0.1653	0.177	0.2036	0.2093	0.2089	0.2154
BABODIR	0.1549*	0.1666*	0.1575*	0.1687*	0.1694*	0.1809*	0.2116*	0.2176*	0.2164*	0.2231*
Improvement	4.97%	4.14%	4.32%	4.09%	3.97%	3.46%	6.22%	6.15%	4.90%	4.89%

Rebalancing the Digital Life: Public Policies for Responsible and Sustainable Technology Use

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Introduction:

The intensive use of digital technologies is radically transforming contemporary lifestyles. The boundaries between private, professional, and social life are becoming blurred, with significant impacts on individuals' mental, physical, and social health (Bawden & Robinson, 2009; OMS, 2022; INSPQ, 2023). These developments raise major public health issues, as well as fundamental questions about our models of consumption. As digital technologies permeate social life, scholars call for a collective rethinking of our relationship with these tools**.** A responsible approach to technological governance can no longer be limited to individual-level strategies, but must include political, cultural, and institutional mechanisms to ensure an ethical and socially just use of technology, grounded in principles of sustainability and systemic justice (Pastor-Escuredo & Vinuesa, 2020).

This research aligns with this perspective by offering a comparative overview of digital well-being public policies in three countries with contrasting institutional and cultural contexts: France, Canada, and the United States. Through a systematic analysis of policies implemented between 2021 and 2024, this study aims to better understand how governments mobilize different types of instruments to promote healthier and more responsible digital practices.

Theoretical background:

While major digital platforms structure the attention economy (Citton, 2014) and exploit users' behavioural dynamics (Zuboff, 2019), risks such as information overload, technological addiction, cognitive alteration, and social fragmentation are becoming increasingly documented (OCDE, 2024).

Within this context, the concept of digital well-being is fully aligned with this logic of reconfiguring consumption practices, and it echoes the principles of responsible consumption in that it aims to reduce excessive use in favour of a more balanced relationship with digital tools. Digital well-being thus emerges as a relevant framework to understand the effects of digital practices on quality of life. Vanden Abeele (2021) defines digital well-being as "a subjective individual experience of optimal balance between the benefits and drawbacks obtained from mobile connectivity. This experiential state is comprised of affective and cognitive appraisals of the integration of digital connectivity into ordinary life. People achieve digital well-being when experiencing maximal controlled pleasure and functional support, together with minimal loss of control and functional impairment. According to the author, digital well-being extends beyond the notion of digital sobriety by questioning the broader relationship between humans and technology. It encompasses multiple dimensions, including screen time management, attention control, digital addiction prevention, digital identity protection, and the quality of social interactions.

Methodology:

This study uses a multi-criteria decision analysis (MCDA) grid (Belton & Stewart, 2002) to assess policies across five domains of public action—regulatory, educational, institutional, economic, and communicational (Lascoumes & Le Galès, 2007; Flipo, 2020).

Initiatives were included if issued by a legitimate public authority between 2021 and 2024 and if they explicitly targeted digital well-being, defined as a balance between technology use and mental, physical, and social health (Vanden Abeele, 2021). Excluded were initiatives limited to digital access (OCDE, 2024) or driven solely by economic/commercial goals (Flipo, 2020).

Each domain was scored from 0 to 5, assessing the intensity, coherence, and structure of initiatives toward digital well-being. A 0 indicates no intervention, while a 5 reflects strong, structured engagement aligned with best practices. To account for the unequal transformative power of instruments, each criterion was weighted based on Lascoumes and Le Galès (2007) and health and well-being policy research (OCDE, 2024; OMS, 2018), which stress that not all instruments generate lasting change.

Results:

On a comparative scale, both raw and weighted scores place the United States first, followed by France and Canada, with modest gaps (raw: 20.2, 20, 19; weighted: 4.2/5, 4.03/5, 3.7/5). In the United States, the educational lever is marked by two structuring laws (e.g., H.B. 379 in Florida) mandating digital education and limiting phone use in classrooms, which grant a top score of 5/5. In France, the SREN Law (2024) secures the highest regulatory score (5/5) through strict oversight of platforms, banning addictive features, enforcing transparency, and applying sanctions under ARCOM (*Autorité de régulation de la communication audiovisuelle et numérique*) and CNIL (*Commission nationale de l'informatique et des libertés*), in line with the DSA/DMA (Digital Services Act/*Digital Markets Act)* and the "Children and Screens" Commission (2024). In Canada, communication is the strongest lever, with the ScienceUpFirst campaign (5/5) and the Federal Mental Health Campaign (2022–2023, 4/5), giving a combined 4.5/5 and ranking as its most effective policy area.

During the period analysed, by issue, all three countries mobilize regulatory tools but with distinct priorities: France (SREN Law) focuses on platform regulation and cognitive overload, Canada (Responsible Digital Charter) on informational autonomy and rights, and the U.S. (KOSA (Kids Online Safety Act), SB 976, Stop the Scroll Act) on youth mental health. In education, they converge on responsible digital practices but diverge in focus: France protects youth mental health, Canada builds digital literacy and resilience (Digital Citizen Initiative), and the U.S. combines behavioral prevention and social media education. The institutional lever coordinates these actions: France (Bronner Commission, CNIL) targets school attention and critical thinking, Canada (Institut national de santé publique du Québec) integrates mental health and rights like privacy, and the U.S. (e.g., Substance Abuse and Mental Health Services Administration) emphasizes youth autonomy against attention-capturing designs. Communication strategies also differ—France emphasizes parental prevention, Canada misinformation awareness and post-COVID support, and the U.S. alerts to risks through the Surgeon General's Advisory. Economically, France (IMPACT) prioritizes therapeutic responses, Canada (Digital Citizen Contribution Program) promotes resilience and critical thinking, and the U.S. (CAMRA Act, Screen Free Week) targets youth cognitive development. Together, these complementary approaches highlight diverse but converging efforts to embed digital well-being in public policy. This analysis should be interpreted as a snapshot of measures introduced between 2021 and 2024 rather than a comprehensive account of the current state of digital well-being policies in each country.

Conclusion:

This study calls for a rethinking of digital public policies not only in terms of technological development or market regulation, but as strategic tools for promoting public health in the digital age. By integrating digital well-being into the performance indicators of public policy, governments can steer digital innovation toward more responsible, sustainable, and community-centred uses. These policies can become strategic levers for supporting voluntary digital downshifting pathways, in the spirit of social justice, public health, and sustainability.

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Adolescents, Smartphones, and Digital Balance: Between Dependency and the Desire for Change

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Introduction:

The omnipresence of smartphones in adolescents' lives has raised growing concern about hyperconnectivity, digital dependence, and their impact on well-being (Moody, 2023). Although these devices provide clear benefits (communication, information, entertainment), they also foster problematic patterns of use. These include fear of missing out (FOMO), constant notifications, and reduced capacity to remain engaged in face-to-face interactions (Brooks & Lasser, 2018; Mason et al., 2022). Such practices are associated with several issues, including anxiety, social withdrawal, reduced self-esteem, as well as physical problems related to sedentary behavior. Against this backdrop, debates on digital well-being suggest that more intentional and balanced approaches to technology could mitigate these effects. Yet little is known about how adolescents themselves perceive such alternatives.

This research addresses the issue by exploring how adolescents navigate their relationship with smartphones and how the use of flip phones might represent a way to restore balance in their digital practices. The interest in flip phones is linked to a rising tendency among some young people to exchange their smartphones for simpler devices (Engle, 2022; Carrier, 2023). Although still marginal, this practice has attracted media attention and is gaining visibility on social media, where young people even refer to summer 2025 as the 'flip phone summer.' (Wilder, 2025). Despite the hype, this phenomenon remains little explored academically.

Our work connects to broader debates on responsible consumption. Like movements promoting healthy diets, sustainable fashion, or voluntary simplicity, digital sobriety invites us to rethink—and reduce—the ways we engage with technology in daily life.

Theoretical Framework: Practice Theory

Our analysis draws on practice theory, which shifts attention from individual traits or attitudes to the practices that shape everyday life (Hargreaves, 2011; Southerton, 2013). In this view, practices are the basic units of social action, understood as configurations of three elements: meanings (shared understandings), materials (objects and infrastructures), and competences (skills and know-how). (Hand, Shove & Southerton, 2005)

Within this framework, dependency is not perceived as an individual weakness but as the outcome of routinized practices shaped by infrastructures, cultural norms, and technological possibilities (Shove & Pantzar, 2005). Conversely, choosing to adopt a flip phone can be understood as an attempt to reconfigure these practices. Such a shift requires redefining meanings, adjusting competences, and learning to do without certain material affordances.

Methodology:

Data were gathered through a short in-person questionnaire completed by 85 adolescents aged 15 to 18 (average time: 15 minutes). Questions were developed to capture not only participants' self-perceptions of their digital use but also their reactions to the idea of adopting a flip phone. Responses were coded thematically to identify recurring patterns and variations in adolescents' perceptions. Data collection took place in France in May 2025.

Results:

Discrepancy Between Perceived and Actual Use
A key finding is the mismatch between adolescents' self-reported and actual screen time. 65% underestimated their usage. In some cases, the gap was substantial (e.g., perception of 4 hours compared to 8 in reality). Many participants expressed surprise or shock at these discrepancies. This illustrates how digital practices are often routinized and unconscious. Viewed through the lens of practice theory, this points to a misalignment between meanings ("I don't use my phone that much") and materials (empirical usage data), generating cognitive dissonance when confronted with the contrast.

Perceived Dependency

When asked if they considered themselves dependent on their smartphones, most participants said yes (68%). This suggests a strong sense of dependency, though rarely framed negatively (as one noted: ‘Not surprising. I’m on my phone all the time! Morning, noon, night.’). Many described this as simply part of everyday life. The paradox lies in recognizing excessive attachment while simultaneously normalizing it as typical of adolescence. Dependency is thus not only individual but embedded in broader social contexts—peers, families, and schools—that treat smartphones as default tools. This duality reveals how hyperconnectivity is both problematized and taken for granted, making change difficult without wider collective shifts.”

Desire for Change
Most participants expressed an interest in modifying their smartphone practices, with 64 explicitly stating a desire to reduce their use. TikTok emerged as the primary platform targeted for reduction. This emphasis on limiting time reflects adolescents’ growing awareness of the negative consequences of certain digital habits and their pursuit of greater balance. Participants demonstrated reflexivity and recognition of the problem, yet also highlighted the difficulty of enacting change.

Barriers to Adopting a Flip Phone
Several challenges about switching to a flip phone were identified: lack of functional tools (e.g., GPS, music); symbolic importance of social networks as spaces of belonging and access to information; and influence of social norms, with some saying they would only consider the change if “everyone else did too.” Several participants noted their reliance on smartphones for schoolwork and staying in contact with friends. This highlights the multifunctional role of smartphones which makes the idea of abandoning them particularly difficult.

Imagined Scenarios Without a Smartphone
When invited to imagine life without a smartphone, travel emerged as the context where this was easiest to picture. Many felt that during a trip, being without a phone would allow them to “enjoy real life more,” to admire landscapes, and to strengthen bonds with friends and family. These reflections indicate that while daily routines feel deeply tied to smartphone use, exceptional moments like travel open up the possibility of alternative practices centered on presence and relationality.

Discussion:

This study highlights adolescents’ ambivalent relationships with smartphones and their views of flip phones as tools for digital sobriety. Practice theory helps frame dependency not just as individual but as practices shaped by norms, infrastructures, and technologies. The findings show both a willingness to reduce use and barriers that complicate change, underscoring the

need to situate digital practices within their broader social context. More broadly, digital sobriety can be situated within responsible consumption. Switching from smartphones to simpler devices echoes other shifts toward moderation, showing how even small adjustments can foster more mindful engagement.

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Perfecting myself might break some eggs: How influencer aspiration negates eco-guilt in influencer driven purchases

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Influencers affect followers' behavior through para-social relationships (Reinikainen, et al., 2020). Social media followers often view influencers as an idealized version of self, using influencers as benchmarks for self-presentation (Jaiswal, et al. 2024). Followers are attracted to influencers who they consider similar to themselves or how they aspire to be. When a follower identifies an isolated discrepancy between the influencer and themself, they experience an increase in purchase intent (Shan, et al. 2019). Following influencers and mimicking of their behavior thus becomes a virtue driven pursuit of self-improvement.

When building parasocial attachments, followers are more driven by social attractiveness than attitude homophily (Masuda et al., 2022), which may result in changes to individual values in the pursuit of social attractiveness. Social media platforms have seen a surge in popularity of influencers building associations with virtue- particularly masculinity and cleanliness. Platforms like Instagram and TikTok amass millions of views and likes for hashtags such as #clean, #cleanbeauty, #cleantok, #cleaneating, #cleangirl and #cleanliving (Jones, 2025), as well as #manliness, #masculinity, #masculineenergy, #redpill (Breen & Hobbins, 2025). Many such posts also contain direct-to-purchase links to sponsored products to facilitate immediate purchases, directly linking values of cleanliness and masculinity to purchase.

Moral Licensing theory (Blanken et al, 2015) tells us that if an individual engages in a behavior or action they see as virtuous, they are more likely to permit themselves to later behave more unethically. On this premise, we explore the hypothesis that consumers may subordinate responsible consumption values when buying is driven by a virtuous goal to bring oneself closer to an idealized version of themselves, often cleaner or more masculine. We explore the possibility that purchasing which would ordinarily be framed by consumers as hedonistic consumption, could be reframed as a value driven pursuit, mediated by influencer aspiration, moderating guilt associated with consumption.

H1: Consumers permit themselves to compromise responsible consumption values when purchasing through influencers

This research will also consider the impact of purchasing through influencers on post-purchase emotions. Consumers often approach consumption through a moral lens, especially when their purchases are perceived to have ethical implications. This sense of ethical accountability can result in emotions such as post-purchase guilt or pride, depending on how aligned the purchase is with their values (Antonetti & Maklan, 2014). As individuals navigate the increasingly blended space of social identity and commerce, identity construction becomes a central mechanism that drives these emotional responses. The act of purchasing particularly when visible or publicly aligned with influencers can serve as a form of self-expression or status signaling (Griskevicius, Tybur, & Van den Bergh, 2010). We therefore test two competing hypotheses:

H2a: consumers feel increased post purchase consumption guilt following influencer driven purchases, due to compromises made to consumption values.

H2b: consumers don't feel increased post purchase consumption guilt, negated by influencer value aspiration.

In testing these hypotheses, we will consider the mediating effect of consistency between an individual's values and the influencer's values and how the alignment affects post-purchase guilt.

The hypotheses will be tested using quantitative methods (SEM). We will obtain a population of respondents who have purchased through i) clean influencers; ii) masculinity influencers; iii) influencers without a clear link to virtuous self-improvement. We will consider the alignment between influencer and follower values and the subsequent impact of the purchase on post purchase guilt. We will measure purity/cleanliness values using Moral Foundations Theory (Graham et al., 2013) and masculinity using Hofstede's Cultural Dimensions (Hofstede & Bond, 1984). To measure eco-guilt we will use a 6 point scale for econ guilt (Malet, 2012).

Through this research we expect to highlight how shopping through influencers changes the emotional landscape of consumer behavior. In terms of theoretical contributions, this research expands on existing frameworks of post-consumption emotion (Antonetti & Maklan, 2014) by incorporating the influencer-follower relationship as a critical axis of analysis. This research contributes to discussions around Sustainable Development Goal (SDG) 12, which advocates for responsible consumption and production.

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Between Materialism and Environmental Values: Understanding Values Contradictions in the Face of Climate Change Across Age

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Introduction :

Sustainable consumption is marked by inherent paradoxes (Maniates, 2014). One of its most enduring tensions lies between the desire to consume and the moral imperative to reduce consumption for planetary well-being (Cherrier, 2025). Individuals are simultaneously urged to "buy less" (Gorge et al., 2015; Guillard, 2019) and to "buy better" through eco-labeled or ethically produced goods. This dual injunction sustains the expansion of the "green" marketplace but rests on fragile psychological foundations. It requires individuals to reconcile two seemingly incompatible values, ecological restraint and material satisfaction, in a culture shaped by market logics and growing norms of affluence (Kilbourne et al., 2009; Schor, 1998). Within Schwartz' (1992) framework, these orientations lie at opposing poles, and empirical studies confirm their negative correlation (Hurst et al., 2013; Richins & Dawson, 1992). Yet emerging research reveals that some consumers, particularly younger adults, endorse both orientations simultaneously (Dermody et al., 2021), thereby challenging the traditional dichotomy. While prior studies have acknowledged this coexistence (Dermody et al., 2021; Diddi et al., 2019; McDonald et al., 2015; Parguel et al., 2017), little is known about how such contradictions unfold over the life course. This study addresses this gap by examining whether age influences the intensity of these value conflicts in the context of climate change, and whether cultural and economic conditions mediate this relationship, drawing on life-span development and cross-cultural psychology.

Literature review:

Materialism, defined by Richins and Dawson (1992) as the prioritization of wealth, possessions, and status, is commonly positioned in opposition to environmental values, which emphasize restraint, sufficiency, and long-term thinking. This cognitive ambivalence (Sipilä et al., 2017) is especially pronounced among young adults aged 18–25. According to postmaterialist theory (Inglehart, 1981), this generation has grown up with heightened awareness of climate change and is more inclined than older cohorts to engage in climate action (Bano et al., 2024), for instance, by joining marches (Fisher, 2019) or practicing second-hand consumption. Yet, emerging adulthood (Arnett, 2000), a life stage centered on identity construction and social integration (Erikson, 1950), also fosters materialistic orientations, as possessions and image serve as important markers of happiness and belonging (Jaspers & Pieters, 2016; Pieters, 2013). Importantly, materialism has itself evolved, distinguishing accumulative from appreciative forms (Kramarczyk & Alemany Oliver, 2022), and even incorporating sustainable behaviors when linked to social status gains (Griskevicius et al., 2010).

Cultural values further shape these tensions. Individualism, power distance, long-term orientation, and indulgence (Hofstede, 1980, 2011) frame worldviews and perceptions of humanity's relationship with nature, and they may vary with age. Cultures emphasizing long-term orientation can facilitate reconciliation between materialistic and ecological goals by framing sustainability as a future-oriented investment. Older populations in such contexts, already more attuned to long-term consequences, may thus face less internal conflict. Conversely, highly individualistic societies, where self-interest dominates, may weaken commitments to ecological justice and interdependence. Hence, cultural value systems constitute the broader normative environment in which age-related differences in value contradictions (VC) emerge and evolve.

Appendices A and B display our conceptual frameworks at both micro and macro levels.

Micro-level study:

We used the sixth wave of the World Values Survey (Inglehart et al., 2014), involving 77,273 respondents across 59 countries. From this database, two items measured materialism and one measured environmental value (see Appendix C). VC was calculated with Thompson et al. (1995) formula. Sex and income (in deciles) were included as controls. A linear regression shows that VC decreases with age ($\beta = -.157$, $p < .001$), controlling for sex ($\beta = -.034$, $p < .001$) and income ($\beta = .114$, $p < .001$). VC is thus higher among men, younger individuals, and the wealthier.

Importantly, income only partially mediates the effect of age, suggesting that developmental processes beyond socioeconomic factors reduce VC with aging.

Macro-level study. We then built a macro database by averaging country-level VC and age scores, and adding national indicators of individualism, power distance, long-term orientation, and indulgence (Hofstede Insights Network), along with standardized per capita GDP, which could influence both age and cultural values. Missing data restricted the sample to 51 countries. A promax factorial analysis (with indulgence missing values replaced by the mean) revealed two cultural dimensions: individualism (negatively correlated with power distance) and long-term orientation (negatively correlated with indulgence). Hayes's (2012) PROCESS macro (model 81) with 5,000 bootstrap samples was applied. Results show that GDP increases mean age ($\beta = 1.867$, $p < .01$), which in turn raises individualism ($\beta = .145$, $p < .001$) and, marginally, long-term orientation ($\beta = .055$, $p = .071$). Controlling for GDP ($\beta = .020$, $p = .014$) and mean age ($\beta = -.007$, $p < .01$), VC is negatively influenced by individualism ($\beta = -.030$, $p = .025$) but not by long-term orientation ($\beta = -.005$, $p = .530$). Finally, the indirect effect of GDP through mean age and individualism on VC is significant and negative (95% CI [–.0203, –.0001]), confirming complementary mediation by individualism.

Discussion:

This research advances sustainable consumption literature by conceptualizing VC as a dynamic construct shaped by both age and socio-cultural context. While earlier studies have noted the coexistence of materialistic and environmental orientations (Dermody et al., 2021; Diddi et al., 2019), they rarely examined how such contradictions evolve across the life span. By integrating life-span development theory with cross-cultural psychology, we show that VC decreases with age, with this effect partly mediated by cultural values at the macro level. These findings enrich Schwartz's (1992) framework by revealing that value conflicts are not fixed oppositions but contingent on both developmental stage and societal context. In particular, we identify individualism as a cultural amplifier that conditions how consumers reconcile their material aspirations with ecological imperatives.

Our results also yield practical implications. Communication strategies should be age-sensitive: younger consumers, who display stronger VC, may respond to campaigns framing sustainability as aspirational and identity-relevant, whereas older adults may be more receptive to messages emphasizing intergenerational responsibility and long-term benefits. Marketers can further leverage cultural variation by positioning green goods as status-enhancing in individualistic societies or as future-oriented investments in long-term oriented contexts. At the societal level, GDP-driven demographic aging indirectly reduces VC, underscoring how economic development shapes sustainability pathways.

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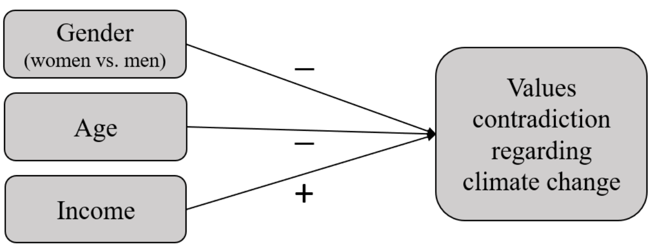
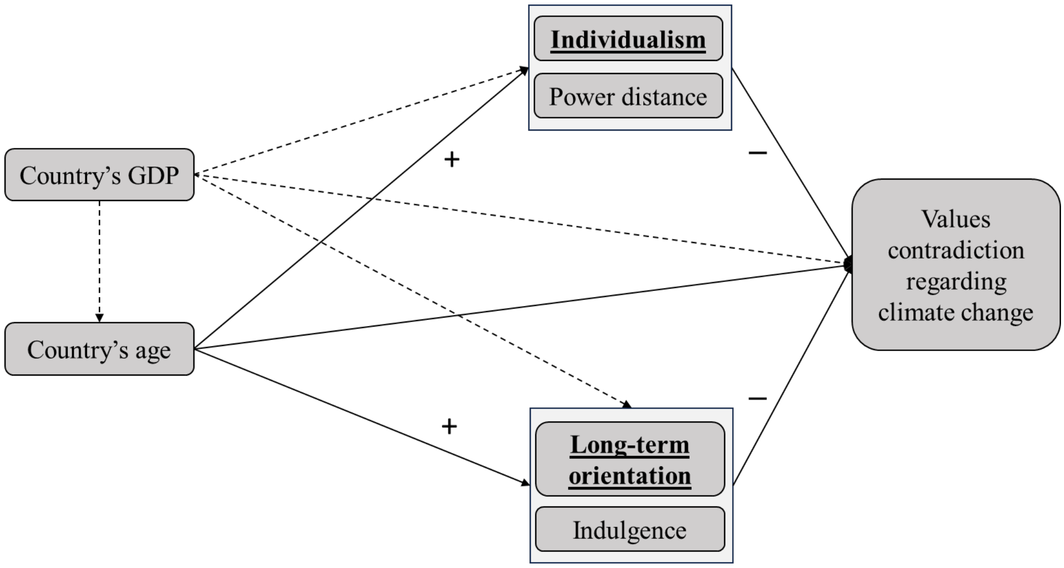
Appendix A. Conceptual frameworks at the micro level



Appendix B. Conceptual frameworks at the macro level



The solid lines represent the core relationships we aim to test, while the dotted lines indicate that the analysis is controlled for GDP, which may significantly influence birth rates and, consequently, the average age of a country's population and the development of specific cultural values (Inglehart et al., 2014).

Appendix C. Measures

Materialism is measured by three items from Schwartz's 1992 questionnaire, corresponding to the three dimensions of materialism according to Richins and Dawson (1992), namely, richness "*It is important to this person to be rich; to have a lot of money and expensive things*", hedonism "*It is important to this person to have a good time; to 'spoil' oneself*", and success "*Being very successful is important to this person; to have people recognize one's achievements*." Environmental value is measured by one item "*Looking after the environment is important to this person; to care for nature and save life resources*."

Participants were shown a card and asked to indicate for each description "*whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you?*" Response categories for the items range from 1 ("*very much like me*") to 6 ("*not at all like me*"). Materialism and environmental items have been reversed for easier lecture and interpretation.

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