E-ISSN: 2746-9107 | P-ISSN: 3047-4248

JOURNAL OF SOCIETY INNOVATION AND DEVELOPMENT

Choice Bracketing and Environmental Policy: A Behavioral Economics Perspective on Influencing Decisions for Sustainable Consumption

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Abstract

Environmental challenges are increasingly shaped by individual decision making which consist of small and repeated choices whose cumulative impacts are often overlooked. Despite rising public awareness, a persistent gap remains between knowledge and actual behavior, indicating limitations in policy approaches based on rational choice assumptions. This study aims to examine how choice bracketing, a concept from behavioral economics, can be used as an analytical framework to better understand environmental behavior and inform environmental policy design. The study employs a narrative literature review drawing on peer reviewed journal articles in behavioral economics, environmental economics, and environmental policy. The analysis synthesizes theoretical and empirical studies that examine how individuals evaluate decisions, perceive risk, and respond to policy interventions in environmental contexts. The findings reveal three key patterns. First, environmental behavior is frequently shaped by narrow bracketing, as individuals tend to evaluate small and repetitive decisions separately, leading to underestimation of cumulative and long-term impacts. Second, many existing policy interventions implicitly operate through broad bracketing by providing aggregate information, framing cumulative risks, or emphasizing long term economic consequences. Third, narrow bracketing is not inherently detrimental, as heuristics and narrow goal setting can reduce cognitive load and support consistent behavior under complex decision environments. These findings highlight the importance of aligning policy design with how individuals evaluate decisions. By positioning choice bracketing as a unifying mechanism, this study contributes to behavioral economics by offering an integrated perspective on environmental decision making and identifying flexible policy pathways for promoting sustainable behavior.

Keywords: Choice Bracketing, Behavioral Economics, Environmental Behavior, Decision Making, Environmental Policy

Introduction

Climate change, environmental degradation, and the excessive exploitation of natural resources have become defining issues of contemporary societies. Rising global temperatures, sea level rise, and the increasing frequency of extreme weather events reflect the cumulative consequences of unsustainable human activities as documented in recent global climate assessments (IPCC, 2022). Over the past two centuries, human action has evolved into a major geophysical force

Received: April 17, 2026 - Accepted: May 03, 2026 - Published online: May 05, 2026

shaping the Earth system, affecting ecological processes at local, regional, and global levels (Steffen, 2010). While environmental policy debates often focus on large scale industrial production and state level regulation, a growing body of research emphasizes that many environmentally significant outcomes are driven by individual behavior, particularly everyday consumption and lifestyle choices.

Governments, policy makers, and various non-governmental actors have responded to this challenge through a variety of environmental policies, ranging from public campaigns to technical regulations. However, these policies are often inappropriate to the urgency of the problems being addressed. Despite increasing public awareness of environmental threats and problems, a persistent gap remains between knowledge and actual behavior (IPCC, 2022). Individuals frequently continue to engage in environmentally harmful actions such as excessive energy consumption, reliance on private transportation, or the use of disposable products, even when they recognize the long-term consequences of these choices. This discrepancy has raised concerns about the effectiveness of traditional policy approaches grounded in neoclassical economic assumptions, which portray individuals as fully rational actors with stable preferences and unlimited cognitive capacity. Empirical evidence increasingly suggests that such assumptions fail to capture how people evaluate environmental risks and tradeoffs (Newell et al., 2014).

Behavioral economics offers an important corrective lens by integrating psychological insights into economic models of decision making. Rather than assuming perfect rationality, behavioral economics highlights cognitive limitations, present bias, and systematic judgment errors that influence individual choices, as emphasized in recent reviews of behavioral environmental economics and policy research (Koundouri et al., 2023). Recent developments in the study of behavioral environmental economics and behavioral public policy further demonstrate that these behavioral factors play a central role in shaping responses to environmental and climate policies (Banerjee & John, 2025; Requate et al., 2025). Empirical studies show that decision outcomes are sensitive to how information is framed, how risks are perceived, and how choices are structured, particularly in contexts involving uncertainty and long-term consequences (Bertolotti et al., 2021; Qi et al., 2022).

One behavioral concept that is especially relevant for understanding environmental decision-making is choice bracketing, which refers to how individuals group decisions into specific units of evaluation (Read et al., 1999). Decisions may be evaluated narrowly, with each choice considered in isolation, or broadly, with multiple choices evaluated as part of an integrated sequence. In environmental contexts, narrow bracketing can lead individuals to underestimate cumulative impacts and to focus on immediate costs rather than long term outcomes (Ellis & Freeman, 2024). In contrast, broad bracketing encourages more forward-looking evaluation by making aggregate consequences more salient. While the environmental behavior literature documents related phenomena such as present bias, risk misperception, and limited attention, these mechanisms are often examined separately rather than as part of a unified evaluative structure (Hardisty & Weber, 2009; Sterman, 2008).

Although behavioral approaches to environmental policy have expanded rapidly, an important conceptual gap remains. Many policy interventions implicitly rely on bracketing mechanisms through tools such as heuristics, framing strategies, and the presentation of aggregate information. However, few studies explicitly articulate choice bracketing as a central analytical framework for understanding why these interventions work and under what conditions they are most effective (Amiri et al., 2024; Banerjee & John, 2025). As a result, findings across studies often appear fragmented, and the relationship between narrow and broad evaluation remains insufficiently theorized (Amiri et al., 2024). This lack of explicit conceptual integration limits the ability of policymakers and researchers to systematically design interventions that align with how individuals evaluate repeated environmental decisions.

The aim of this study is to examine how choice bracketing can be used as an analytical framework to better understand environmental behavior and to inform environmental policy design. Specifically, the study addresses the following questions: how do narrow and broad bracketing shape individual environmental decision making and how do existing policy interventions operate through these evaluation patterns. To address these questions, the study

employs a narrative literature review of peer reviewed research in behavioral economics, environmental economics, and environmental policy.

This study contributes to literature in several ways. First, it integrates dispersed behavioral findings into a coherent framework centered on choice bracketing, clarifying how present bias, risk misperception, and cumulative impact evaluation are connected through decision evaluation structures. Second, it offers theoretical value by positioning choice bracketing as a unifying mechanism within behavioral economics. Third, it provides practical insights for environmental policy design by highlighting when narrow or broad bracketing may be more appropriate depending on the structure of the targeted behavior.

The remainder of this paper is structured as follows. The next section reviews relevant behavioral economics literature and introduces the concept of choice bracketing. Subsequent sections examine how choice bracketing manifests in environmental behavior and analyze policy interventions through this framework. The paper concludes by summarizing key findings, discussing implications for research and policy, and outlining directions for future work.

Methods

This study employs a narrative literature review as its research design. A narrative review is appropriate because the objective of the study is to synthesize and interpret existing theoretical and empirical research in behavioral economics rather than to test hypotheses or generate primary data. The study seeks to examine how individuals organize decisions into specific units of evaluation and how this process influences environmental behavior and policy outcomes. By integrating insights across behavioral economics and environmental policy research, this design allows for a theoretically grounded analysis of choice bracketing, narrow and broad evaluation, and related behavioral mechanisms (Babbie, 2012; Read et al., 1999).

The data used in this study consist of secondary sources drawn from peer reviewed academic literature. Relevant studies were obtained from major academic databases, including Scopus, Web of Science, and Google Scholar. The review focused on English language journal articles in behavioral economics, environmental economics, and environmental policy that address environmental decision making, behavioral biases, risk perception, and policy framing. No interviews, surveys, or direct observations were conducted, as the study relies exclusively on published academic research.

Data collection was conducted through a structured literature search followed by several stages of screening. Keyword research were performed using terms related to choice bracketing, environmental behavior, behavioral biases, cumulative impact, risk perception, and policy framing. Titles and abstracts were first reviewed to assess relevance to the study's focus on decision evaluation and repeated environmental choices. Articles that discussed environmental outcomes without engaging with decision making processes were excluded. The remaining studies were examined in full text to ensure that they contributed substantively to understanding how individuals evaluate repeated decisions, cumulative impacts, or long-term risks.

The primary research instruments were academic databases and a keyword-based search strategy. These instruments functioned as tools for identifying and organizing relevant literature. To support consistency in analysis, a literature mapping table was used to document key aspects of each selected study, including theoretical orientation, behavioral mechanisms discussed, environmental context, and policy relevance. This approach facilitated systematic comparison across studies while maintaining the flexibility characteristic of narrative reviews.

Measurement in this study is conceptual rather than quantitative. Instead of numerical indicators or statistical variables, the analysis focused on identifying and classifying recurring conceptual elements within literature. Key analytical categories included narrow bracketing, broad bracketing, cumulative impact perception, present bias, temporal discounting, risk misperception, and cognitive limitations. These categories were used to guide comparison across studies and to structure the synthesis of findings.

Data analysis was conducted using thematic synthesis. The selected studies were read in depth and compared to identify recurring patterns in how environmental decisions are evaluated and how policy interventions influence decision making processes. The analysis involved identifying relevant conceptual content related to decision grouping and evaluation, organizing

this content into thematic categories corresponding to narrow and broad bracketing mechanisms, and synthesizing these themes to clarify how different policy approaches operate through bracketing processes. This analytical approach enabled a coherent and theory driven interpretation of the literature consistent with behavioral economics research standards (Read et al., 1999; Thaler & Sunstein, 2008).

Behavioral Economics as Corrective Lens

The ineffectiveness of environmental policies cannot be separated from the basic assumptions of neoclassical economics, which views individuals as rational agents with stable preferences, perfect information, and unlimited evaluation capabilities. Within this framework, individuals ought to constantly opt for actions that maximize their utility, including in the environmental context. However, reality shows that individuals often fail to take actions that are objectively beneficial, both for themselves and for the environment (Koundouri et al., 2023; Banerjee & John, 2025).

Empirical examples show a discrepancy between the predictions of rational models and actual behavior. Many households do not invest in energy-efficient appliances even though such investments provide long-term cost savings. Bertolotti et al. (2021) showed that even when scientific information about climate change is available and scientific consensus is well-established, a portion of the public remains skeptical or reluctant to accept the evidence. This doubt affects attitudes toward climate change and hinders the preventive actions that should be taken, such as protection against flood risks or investment in other environmental risk mitigation. These phenomena confirm that rational models alone cannot explain behavioral biases.

In his study, Kuehnhanss (2018) summarized several criticisms of the concept of bounded rationality. Among them, rationality is not only determined by goals and the external environment but also by the limitations of individuals' internal processes in processing information and evaluating options. In reality, individuals do not follow an ideal set of rules but rather use simpler procedures to achieve "good enough" decisions. Thus, there is a significant gap between the substantive rationality assumed by classical theory and the practical rationality employed by individuals in real life, this distinction remains central in contemporary behavioral environmental economics (Koundouri et al., 2023).

Criticism of this rational model was later strengthened in the context of public policy. Kuehnhanss (2018) demonstrates that many policies fail to achieve optimal results because they are built on the assumption that individuals are unitary actors who fully understand their preferences and act consistently to maximize utility. In fact, individual choices are not always stable or fully articulated, so the decisions made do not always reflect their long-term interests. Banerjee & John (2025) identify this phenomenon as a key reason for limited policy effectiveness in environmental domains

In this context, behavioral economics offers an important corrective lens. Thaler and Sunstein (2008) introduced the idea that policy interventions can be designed to help individuals make better decisions as if they possess full information, unlimited cognitive ability, and complete self-control. This approach, known as libertarian paternalism, emphasizes that choice architecture can influence behavior without restricting freedom of choice, and continues to inform contemporary environmental policy design and evaluation (Amiri et al., 2024). Emblemsvag (2013) also argued that attacking individuals' choices does not align with a democratic societal system. Therefore, policymakers should create policies that can alter decision-making behavior with the goal of achieving an overall systemic effect in a positive direction.

Chetty (2015) made an important contribution by showing that incorporating behavioral factors into policy analysis is not only a normative issue but also a predictive one. He classified three main implications of behavioral economics for public policy. First, behavioral economics offers new policy tools to shape public behavior. Second, it can lead to better predictions about the effect of existing policies. Third, behavioral economics can develop new welfare implications. Considering information limitations, inertia, or perception errors, policy models can generate more accurate predictions regarding individual responses to interventions. This approach is

particularly relevant in the context of the environment, where decisions often involve uncertainty, long-term risks, and trade-offs that are not always comprehensively evaluated by individuals.

Therefore, behavioral economics offers a more practical analytical framework to comprehend why individuals frequently neglect actions that promote sustainability. However, to understand how individuals organize their decisions, especially small and repetitive decisions with a cumulative impact, a more specific concept is needed. This is where choice bracketing becomes relevant, a concept that has received renewed empirical attention in recent decision-making research (Ellis & Freeman, 2024). This concept explains how individuals group decisions within specific evaluation units and how this grouping influences behavior.

Choice Bracketing: Concept and Literature Development

The concept of choice bracketing was introduced to explain how individuals group decisions into specific units of evaluation. In this context, individuals can assess decisions in a narrow manner (narrow bracketing), treating each decision in isolation as if it lacks relevance to others, or in a broad manner (broad bracketing), considering several decisions concurrently as a cohesive sequence (Read et al., 1999).

Read et al. (1999) showed that the size of the brackets used by individuals has major implications for behavior. In narrow bracketing, individuals tend to focus on the immediate consequences of each decision, thus ignoring the cumulative impact or long-term patterns. On the other hand, broad bracketing allows individuals to see the bigger picture and consider the aggregate consequences of a series of decisions. Thus, choice bracketing is not just a technical way to group options but a psychological mechanism that influences how individuals assess risks, benefits, and trade-offs. Ellis & Freeman (2024) further supports this mechanism by showing that narrow bracketing leads individuals to undervalue aggregated outcomes, whereas broader evaluation improves decision consistency.

Narrow bracketing frequently results from people making decisions too quickly. People prefer to assess options one at a time since integrating multiple decisions at once requires a large amount of cognitive ability (Read et al., 1999). Because every gamble is considered a distinct possible loss, tight bracketing in the context of risk leads people to turn down tiny, profitable bets. People are more inclined to take the risk, nevertheless, when the identical offers are assessed collectively (broad bracketing), they perceive the cumulative result to be profitable.

This phenomenon shows that narrow bracketing is not merely a preference but a result of cognitive constraints and how individuals process information. Read et al. (1999) also demonstrated that narrow bracketing can lead to seemingly inconsistent behaviors, such as failing to maintain a healthy diet or failing to stop a bad habit, because each small temptation or expense is evaluated separately without considering the long-term impact. Contemporary studies confirm that these inconsistencies arise from limited capacity to integrate repeated decisions, rather than from unstable preferences alone (Zheng & Zhou, 2025)

Based on the analysis by Read et al. (1999), there are several core mechanisms that explain why narrow bracketing occurs: First, narrow bracketing emerges as a form of cognitive simplification. Combining many decisions into a single giant evaluation requires significant mental effort, leading individuals to choose to evaluate them separately to reduce cognitive load. Second, narrow bracketing occurs because individuals are sensitive to small losses and tend to evaluate risks separately. In their experiment, individuals rejected small, profitable bets when evaluated one at a time but accepted the same bets when evaluated in aggregate. This shows that narrow bracketing strengthens sensitivity to small losses.

Third, narrow bracketing occurs because individuals focus on the local outcome of each decision rather than the overall distribution of outcomes across repeated decisions. When decisions are evaluated separately, small losses appear more significant than long-term cumulative benefits. Fourth, narrow bracketing occurs because individuals often fail to integrate repeated decisions. Many decisions in daily life are repetitive, but individuals do not spontaneously see them as an interconnected series of decisions. These four mechanisms are at the core of choice bracketing theory and they form the basis for subsequent literature development. It also continues to serve as the foundation for recent theoretical and empirical developments in the choice bracketing literature (Ellis & Freeman, 2024).

Since its first presentation in 1999, the idea of choice bracketing has evolved in various contexts. Koszegi and Rabin (2006) expanded this concept by showing that reference-dependent preferences interact with bracketing. When individuals evaluate decisions narrowly, each decision creates a new reference point, thus reinforcing sensitivity to small losses. This approach explains why narrow bracketing can lead to seemingly inconsistent or irrational behavior.

In risky decisions, narrow bracketing is a typical occurrence, as demonstrated by Rabin and Weizsäcker (2009). They discovered individuals consistently assess small bets independently, which leads to a significantly higher degree of risk aversion than what traditional utility theory would have anticipated.

Webb and Shu (2017) made a contribution by demonstrating that narrow bracketing is largely due to cognitive capacity limitations. They found that individuals are unable to independently construct cumulative probability distributions, leading them to rely on simple heuristics that result in narrow evaluations. When aggregate information is provided explicitly, individuals are better able to perform broad bracketing and make decisions more consistent with expected value. Recent work continues to refine these insights by demonstrating heterogeneity in bracketing behavior and identifying intermediate bracketing patterns between narrow and broad evaluation (Ellis & Freeman, 2024)

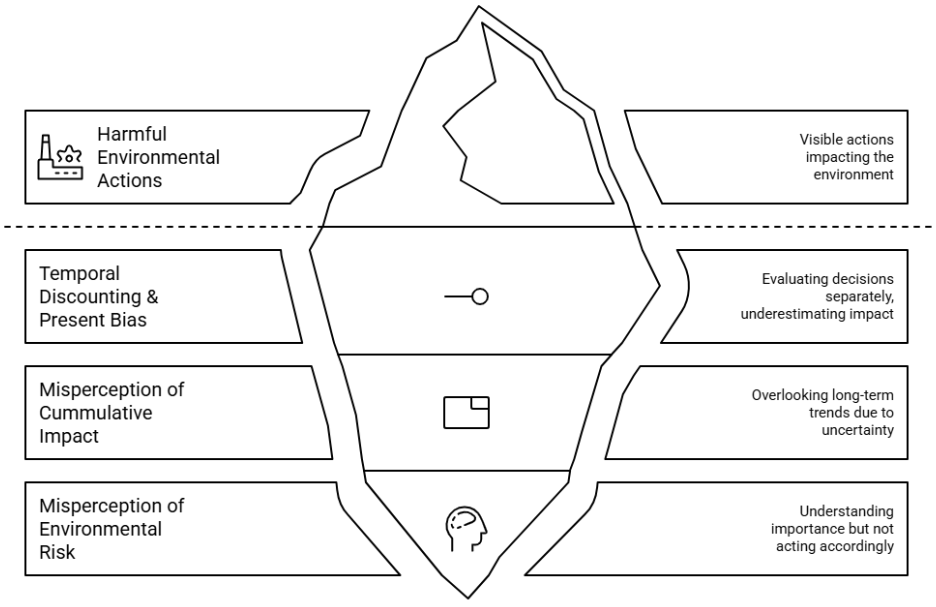
Overall, the literature suggests that choice bracketing is a fundamental mechanism in decision-making. Narrow bracketing can lead to seemingly inconsistent behavior, such as avoiding small profitable risks, neglecting healthy habits, or even failing to understand the cumulative impact of daily bad consumption choices. Conversely, broad bracketing can improve behavioral consistency and help individuals achieve long-term goals. This growing body of recent evidence reinforces the relevance of choice bracketing as a contemporary analytical framework rather than a historical concept.

Thus, choice bracketing provides a strong theoretical framework for understanding why environemental behavior is often inconsistent with sustainability goals. Narrow bracketing explains why individuals fail to see the connections between decisions, overlook cumulative impacts, and underestimate long-term risks.

Findings

The review reveals consistent patterns in how environmental decisions and policy interventions operate through choice bracketing mechanisms, even when the term itself is not explicitly employed. Across the literature, three interrelated findings emerge concerning individual behavior, policy design, and the interaction between narrow and broad evaluative frames.

Figure 1: Choice Bracketing and Environmental Behavior. Source: Author's own elaboration.



First, the literature shows that environmental behavior is predominantly shaped by narrow bracketing, particularly in decisions involving small, repeated actions with delayed consequences. Studies consistently report that individuals evaluate environmental choices in isolation and over short time horizons, which leads to systematic underestimation of cumulative impacts. For example, Hardisty and Weber (2009) demonstrate that individuals discount future environmental benefits more strongly than monetary outcomes, resulting in lower willingness to bear immediate costs for long-term environmental gains. Similarly, Newell et al. (2014) documents that household decisions related to energy consumption and climate risk are rarely evaluated as part of an integrated sequence, despite their cumulative significance. In the context of risk perception, Chaudhry, Hand, and Kunreuther (2020) show that individuals often treat low-probability environmental risks as negligible when assessed annually, even though cumulative risk increases substantially over longer periods. More recent studies confirm that this pattern persists in contemporary environmental contexts, where individuals continue to prioritize immediate costs over long-term environmental benefits despite increased access to information (Qi et al., 2022; Requate et al., 2025). Evidence from climate and low carbon behavior research further shows that narrow evaluation contributes to weak behavioral responses even when environmental risks are widely acknowledged (Banerjee & John, 2025). These findings indicate that narrow bracketing is a dominant cognitive pattern underlying the gap between environmental awareness and behavioral outcomes.

Second, the analysis finds that many environmental policy instruments implicitly induce broad bracketing and that such interventions are associated with more consistent pro-environmental choices. Several studies show that presenting aggregate information enables individuals to integrate repeated decisions more effectively. Camilleri and Larrick (2013) provide empirical evidence that metric and scale design influences how individuals perceive cumulative energy use, leading to more accurate assessments of environmental impact. Webb and Shu (2017) further demonstrate that when individuals are provided with aggregated payoff distributions rather than isolated outcomes, their decisions become more aligned with expected value over repeated choices. In policy communication, Bertolotti, Catellani, and Nelson (2021) find that framing climate policies in terms of cumulative economic consequences increases acceptance among both climate believers and sceptics. Recent research reinforces this conclusion by showing that policies emphasizing cumulative impacts and long-term system effects are more effective in shaping pro environmental behavior than those focusing on isolated outcomes (Payne Sturges et al., 2021; Amiri et al., 2024). These findings suggest that broad bracketing remains a relevant and effective mechanism in current sustainability interventions.

Third, the findings indicate that narrow bracketing can also function as a policy-enabling mechanism rather than solely as a behavioral limitation. Several studies highlight that when cognitive demands are high, narrowly defined heuristics and targets support behavioral consistency. Galesic, Kause, and Gaissmaier (2015) argue that simple rules of thumb allow individuals to cope with decision complexity and uncertainty, particularly in environmental contexts. Koch and Nafziger (2019) show that narrow goal setting reduces postponement and improves adherence to intended behaviors by limiting opportunities for self-control failure. Recent empirical evidence supports this view by demonstrating that simple behavioral cues and narrowly framed goals can improve compliance with sustainability-oriented actions, particularly when decision environments are complex or information is overwhelming (Qi et al., 2022; Amiri et al., 2024). These results suggest that narrow bracketing, when deliberately guided, can focus attention on the most impactful actions and facilitate behavior change in situations where broad evaluation is cognitively burdensome.

Overall, the findings reveal two recurrent policy pathways operating through choice bracketing. One pathway relies on narrowing attention through heuristics and short-term goals to support action under cognitive constraints. The other pathway expands evaluation by emphasizing cumulative impacts, long-term risks, and aggregate outcomes. Although these pathways appear distinct, the literature indicates that they are not mutually exclusive but context dependent. Environmental policies implicitly operate along these pathways depending on the characteristics of the targeted behavior, the temporal structure of outcomes, and individual cognitive limitations. This synthesis highlights choice bracketing as a unifying mechanism that

connects behavioral bias, policy design, and environmental outcomes across otherwise fragmented strands of research.

Discussion

This review set out to determine how choice bracketing can be used as an analytical framework for designing more effective environmental policies. The findings indicate three tightly connected conclusions. First, many environmentally consequential behaviors are evaluated through narrow brackets, so people treat repeated, low-salience choices as isolated events and underweight their cumulative consequences. Second, a large share of policy instruments discussed in the environmental behavior and communication literature can be reinterpreted as attempts to expand evaluation brackets by making cumulative risk, aggregate impact, or long-run economic consequences more salient. Third, narrow bracketing is not only a source of bias but can also be deliberately harnessed through heuristics and narrowly defined goals when cognitive demands make broad evaluation unrealistic. the review shows that many existing environmental policy interventions implicitly operate by either narrowing or broadening individuals' evaluation brackets, even though prior studies do not explicitly articulate choice bracketing as a policy framework.

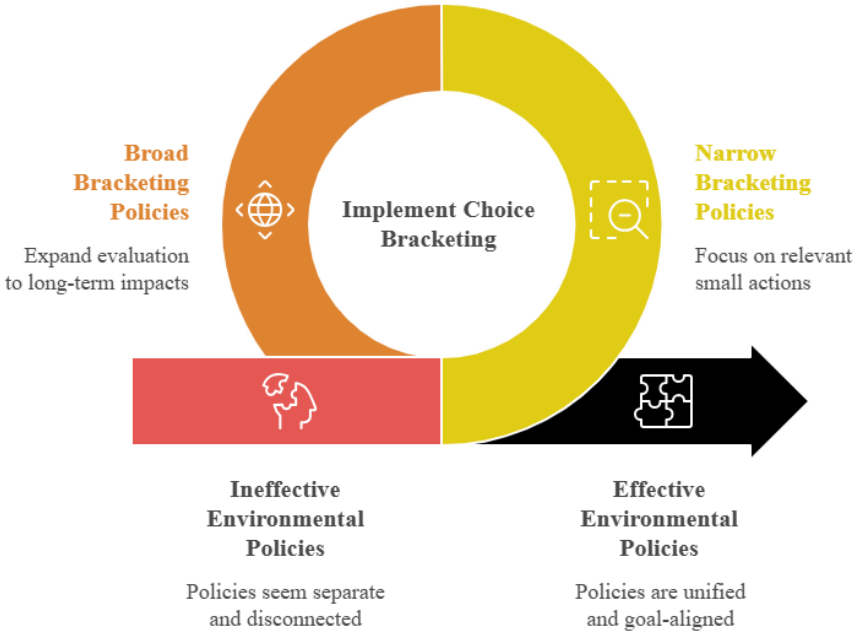
Positioned against prior scholarship, this synthesis aligns with foundational work on mental accounting and bracketing, where the unit of evaluation shapes risk taking and self-control outcomes (Read et al., 1999; Rabin & Weizsäcker, 2009). Recent experimental evidence confirms that narrow bracketing remains a dominant evaluation pattern across domains, reinforcing the continued relevance of bracketing assumptions in behavioral models (Ellis & Freeman, 2024). It also complements behavioral public policy arguments that choice architecture can improve decisions without removing choice, particularly when attention, information processing, and self-control are bounded (Thaler & Sunstein, 2008; Chetty, 2015). This perspective further developed in contemporary behavioral public policy research (Banerjee & John, 2025). What the present review adds is policy-facing integration. Rather than treating present bias, risk misperception, and limited attention as separate explanations, the bracketing lens shows how these mechanisms often emerge from a common source: the structure of evaluation over time and across repeated decisions.

A closer examination of narrow bracketing highlights several micro-mechanisms that matter for environmental policy design. Temporal discounting creates a predictable asymmetry between immediate private costs and delayed collective benefits, which helps explain why individuals may endorse climate goals while resisting higher prices or inconvenience in everyday choices (Hardisty & Weber, 2009; Van der Linden, 2018). In recent years, Requate et al. (2025) also confirms that temporal distance and uncertainty remain powerful barriers to protective action, even under high-risk awareness. Risk processes further reinforce narrow evaluation when threats are rare, uncertain, or temporally distant, which reduces protective behavior even when potential losses are large (Chaudhry et al., 2020; Newell et al., 2014). Finally, cognitive representation matters. When individuals hold simplified, linear mental models of complex environmental systems, they struggle to integrate delays and accumulation, which makes cumulative harm difficult to perceive and keeps evaluation local (Sterman, 2008; Newell et al., 2014). Taken together, these strands imply that narrow bracketing is not merely a preference but often a cognitive default under complexity and uncertainty, especially in domains where feedback is delayed or noisy.

The broad-bracketing pathway in the reviewed studies is similarly multi-component. Information design can change what people perceive as the relevant unit of evaluation. Evidence from choice-architecture work shows that metric and scale design shapes judgments about energy use and can correct systematic misestimation by making comparisons and aggregation easier (Camilleri & Larrick, 2013; Webb & Shu, 2017). Communication framing works through a related route: by shifting attention to broader consequences and by linking environmental outcomes to domains that audiences treat as personally or socially consequential. For instance, framing climate policy in terms of economic impacts can increase receptivity across audience segments that differ in climate beliefs (Bertolotti et al., 2021; Homar & Cvelbar, 2021; Amiri et al., 2024). Importantly, these broadening strategies are not equivalent. Aggregation changes the

informational object, such as cumulative emissions or lifetime costs, whereas framing changes interpretive emphasis, such as losses versus gains or environmental versus economic consequences. Treating both as "broad bracketing" is useful for synthesis, but policy design benefits from distinguishing which cognitive bottleneck is being targeted: integration of quantities, salience of long-run outcomes, or motivational relevance.

Figure 2: Choice Bracketing and Environmental Policy. Source: Author's own elaboration.



One of the most policy-relevant implications of the review is that narrow and broad bracketing should be treated as complementary tools, not as competing philosophies. Recent experimental evidence highlights substantial heterogeneity in bracketing behavior, suggesting that policy effectiveness depends on matching the induced evaluation frame to the decision context (Zheng & Zhou, 2025). In high-complexity contexts where comprehensive evaluation is unlikely, narrow bracketing can be directed toward high-impact actions through "good enough" heuristics, reducing decision costs and supporting repeatable habits (Galesic et al., 2015; Koch & Nafziger, 2019). In contrast, where the main barrier is underestimation of cumulative impact or cumulative risk, broad bracketing is more appropriate because it changes what is cognitively available for evaluation, particularly when individuals struggle to construct aggregate distributions unaided (Webb & Shu, 2017; Chaudhry et al., 2020). This implies a design principle for policy within the aims and scope of behavioral environmental policy research: match the induced bracket to the structure of the behavior. Repeated, low-salience behaviors with delayed consequences often require tools that either broaden evaluation through aggregation or narrow attention to a small set of high-leverage actions, depending on whether the binding constraint is integration or action initiation.

The discussion should also acknowledge limits that follow from the review design. The manuscript is a narrative synthesis rather than a systematic review or meta-analysis, so it is not intended to provide exhaustive coverage or effect-size comparisons across interventions. The included studies also span heterogeneous outcomes, ranging from risk protection to consumption choices and policy acceptance, which complicates direct comparability even when the bracketing mechanism is conceptually similar. In addition, several strands of evidence rest on experimental or survey contexts that may not fully capture implementation constraints in real-world policy environments, such as institutional capacity, distributional impacts, or political feasibility. These limitations do not weaken the conceptual contribution, but they do counsel caution in claiming universal superiority for any single bracketing strategy.

Future research can build stronger cumulative evidence base by translating the review's conceptual map into testable designs. The first priority is to develop an explicit taxonomy linking policy instruments to bracketing mechanisms, distinguishing aggregation, framing, goal-setting,

and heuristic-based guidance, then testing which pathway works best for which behavioral class. Second, field experiments and quasi-experiments in energy billing, mobility, and waste reduction could compare narrow versus broad bracketing interventions under real constraints, measuring persistence and spillovers rather than single-shot outcomes (Camilleri & Larrick, 2013; Thaler & Sunstein, 2008). Finally, welfare analysis remains underdeveloped in this area. Future work can integrate behavioral welfare perspectives with distributional and equity considerations to ensure that bracketing-based interventions improve outcomes without imposing undue burdens on vulnerable groups (Chetty, 2015; Kuehnhanss, 2018).

Conclusion

This study examined how choice bracketing can be used as an analytical framework to better understand environmental behavior and to inform the design of environmental policies. Drawing on the behavioral economics literature, the review focused on how individuals organize decisions into specific units of evaluation and how this process shapes responses to environmental risks, costs, and long-term consequences.

The review highlights three main findings. First, environmental behavior is frequently influenced by narrow bracketing, as many environmentally relevant actions are small, repetitive, and evaluated separately. When decisions are assessed in isolation, individuals tend to underestimate cumulative impacts and discount future environmental benefits, contributing to the persistent gap between environmental awareness and actual behavior. Second, the review shows that many existing policy interventions implicitly expand individuals' evaluation brackets by providing aggregate information, framing cumulative risks, or emphasizing long term economic consequences. These approaches help individuals better recognize the overall impact of repeated decisions. Third, the findings demonstrate that narrow bracketing is not inherently problematic. When deliberately guided through heuristics and narrow goal setting, narrow bracketing can reduce cognitive load, counter present bias, and support consistent environmental behavior.

These findings have important implications for the field of behavioral economics. By positioning choice bracketing as a central mechanism, the study connects several well-documented behavioral patterns, including present bias, temporal discounting, risk misperception, and limited attention, within a single explanatory framework. Rather than treating these phenomena as separate sources of behavioral failure, the bracketing perspective clarifies how they arise from the way individuals structure decision evaluation over time and across repeated choices.

The contribution of this study lies in showing that policy effectiveness depends not only on correcting behavioral biases but also on aligning the size of the evaluation bracket with the structure of the targeted behavior. Broad bracketing is particularly valuable when cumulative impacts and long-term risks are difficult to perceive, while narrow bracketing can be effective when complexity and cognitive constraints make comprehensive evaluation unrealistic. This insight suggests that narrow and broad bracketing should be understood as complementary tools in environmental policy design.

Several limitations should be acknowledged. This study is a narrative literature review and does not provide a systematic or quantitative comparison of policy effects. The reviewed studies vary in context and methodology, and many rely on experimental or survey settings that may not fully capture real world policy constraints. These limitations do not diminish the conceptual contribution of the study, but they indicate that the findings should be interpreted with caution.

Future research could build on this review by explicitly developing choice bracketing as a policy framework and by empirically testing bracketing-based interventions across different environmental contexts. Comparative studies examining when narrow or broad bracketing is more effective, as well as research on individual and contextual heterogeneity, would further strengthen the empirical foundation of this approach. From a practical perspective, policymakers are encouraged to pay closer attention to how decisions are grouped and framed in policy design. By aligning policy instruments with the way individuals evaluate decisions, environmental policies may become more effective in promoting sustainable behavior.

Ethics approval

Not required.

Competing interests

All the authors declare that there are no conflicts of interest.

Declaration of artificial intelligence use

This study used artificial intelligence (AI) tools and methodologies in the following capacities:

1. Visualization: AI tool, Napkin AI, was used for generating graphs, charts, and visual summaries.
2. Manuscript writing support: AI-based language models, QuillBot and Copilot, were employed to:
    a. Language refinement (improving grammar, sentence structure, and readability of the manuscript).
    b. Technical writing assistance (providing suggestions for structuring complex technical descriptions more effectively)

I confirm that all AI-assisted processes were critically reviewed to ensure the integrity of the results. The final decisions and interpretations in this article were made by the authors.

How to cite

Ulfah, A. (2026). Choice Bracketing and Environmental Policy: A Behavioral Economics Perspective on Influencing Decisions for Sustainable Consumption. *Journal of Society Innovation and Development*, *7*(2), 307–318. https://doi.org/10.63924/jsid.v7i2.278

References

Amiri, B., Jafarian, A., & Abdi, Z. (2024). Nudging towards sustainability: A comprehensive review. *Discover Sustainability, 5*, 444. https://doi.org/10.1007/s43621-024-00618-3

Banerjee, S., & John, P. (2025). Behavioral public policy: Past, present, and future. *Policy and Society*. https://doi.org/10.1093/polsoc/puaf012

Bertolotti, M., Catellani, P., & Nelson, T. (2021). Framing messages on the economic impact of climate change policies: Effects on climate believers and climate skeptics. *Environmental Communication, 15*(6), 715–730. https://doi.org/10.1080/17524032.2021.1890175

Camilleri, A. R., & Larrick, R. P. (2013). Metric and scale design as choice architecture tools. *Journal of Public Policy & Marketing, 33*(1), 108–125. https://doi.org/10.1509/jppm.12.151

Chaudhry, S. J., Hand, M., & Kunreuther, H. (2020). Broad bracketing for low-probability events. *Journal of Risk and Uncertainty, 61*(3), 211–244. https://doi.org/10.1007/s11166-020-09343-4

Chetty, R. (2015). Behavioral economics and public policy: A pragmatic perspective. *American Economic Review, 105*(5), 1–33. https://doi.org/10.1257/aer.p20151108

Ellis, A., & Freeman, D. J. (2024). *Revealing choice bracketing*. American Economic Review, 114(9), 2668–2700. https://doi.org/10.1257/aer.20210877

Emblemsvåg, J. (2013). How economic behavior can hamper sustainable development. *World Journal of Science, Technology and Sustainable Development, 10*(4), 252–259. https://doi.org/10.1108/WJSTSD-02-2013-0016

Galesic, M., Kause, A., & Gaissmaier, W. (2015). A sampling framework for uncertainty in individual environmental decisions. *Topics in Cognitive Science, 8*(1), 242–258. https://doi.org/10.1111/tops.12172

Hardisty, D. J., & Weber, E. U. (2009). Discounting future green: Money versus the environment. *Journal of Experimental Psychology: General, 138*(3), 329–340. https://doi.org/10.1037/a0016433

Homar, A. R., & Cvelbar, L. K. (2021). The effects of framing on environmental decisions: A systematic literature review. *Ecological Economics, 183*, Article 106950. https://doi.org/10.1016/j.ecolecon.2021.106950

Intergovernmental Panel on Climate Change. (2022). *Climate change 2022: Impacts, adaptation and vulnerability*. https://www.ipcc.ch/2022/02/28/pr-wgii-ar6/

Koch, A. K., & Nafziger, J. (2019). Correlates of narrow bracketing. *Scandinavian Journal of Economics, 121*(4), 1441–1472. https://doi.org/10.1111/sjoe.12311

Kőszegi, B., & Rabin, M. (2006). A model of reference-dependent preferences. *Quarterly Journal of Economics, 121*(4), 1133–1165. https://doi.org/10.1093/qje/121.4.1133

Koundouri, P., Hammer, B., Kuhl, U., & Velias, A. (2023). *Behavioral economics and neuroeconomics of environmental values*. Annual Review of Resource Economics, 15, 153–176. https://doi.org/10.1146/annurev-resource-101722-082743

Kuehnhanss, C. R. (2018). The challenges of behavioral insights for effective policy design. *Policy and Society, 38*(1), 14–40. https://doi.org/10.1080/14494035.2018.1511188

Newell, B. R., et al. (2014). The psychology of environmental decisions. *Annual Review of Environment and Resources, 39*(1), 443–467. https://doi.org/10.1146/annurev-environ-010713-094623

Payne-Sturges, D. C., Sangaramoorthy, T., & Mittmann, H. (2021). Framing environmental health decision-making and cumulative impacts. *International Journal of Environmental Research and Public Health, 18*, 3947. https://doi.org/10.3390/ijerph18083947

Qi, A., Ji, Z., Gong, Y., Yang, B., & Sun, Y. (2022). The impact of gain–loss framing on low-carbon behavior. *International Journal of Environmental Research and Public Health, 19*(17), 11008. https://doi.org/10.3390/ijerph191711008

Rabin, M., & Weizsäcker, G. (2009). Narrow bracketing and dominated choices. *American Economic Review, 99*(4), 1508–1543. https://doi.org/10.1257/aer.99.4.1508

Read, D., Loewenstein, G., & Rabin, M. (1999). Choice bracketing. *Journal of Risk and Uncertainty, 19*(1–3), 171–197. https://doi.org/10.1023/A:1007879411489

Requate, T., Wagner, G., & Waichman, I. (2025). Behavioral economics of climate action. *npj Climate Action, 4*, 109. https://www.nature.com/articles/s44168-025-00291-w

Steffen, W. (2010). Observed trends in Earth system behavior. *Wiley Interdisciplinary Reviews: Climate Change, 1*(3), 428–449. https://doi.org/10.1002/wcc.36

Sterman, J. D. (2008). Risk communication on climate: Mental models and mass balance. *Science, 322*(5901), 532–533. https://doi.org/10.1126/science.1162574

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.

Van der Linden, S. (2018). Warm glow is associated with low- but not high-cost sustainable behaviour. *Apollo (University of Cambridge)*. https://doi.org/10.17863/cam.21048

Webb, E. C., & Shu, S. B. (2017). Is broad bracketing always better? How broad decision framing leads to more optimal preferences over repeated gambles. *Judgment and Decision Making, 12*(4), 382–395. https://doi.org/10.1017/S1930297500006252

Zheng, J., & Zhou, L. (2025). *Too risky to hedge: An experiment on narrow bracketing*. Experimental Economics, 28(1), 128–154. https://doi.org/10.1017/eec.2025.1