

Rational Choice Theory: A Review of Historical Evolution, Critiques, and Domain Validity

Daniele Schilirò (Corresponding Author)

Accademia Peloritana dei Pericolanti, University of Messina, Italy

E-mail: dschiliro@unime.it

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Abstract

Rational Choice Theory (RCT) constitutes the analytical foundation of neoclassical microeconomics and contemporary decision theory, modeling individual choice as a mathematically consistent process of utility maximization grounded in axiomatic principles of rationality. This paper examines the historical and conceptual evolution of RCT as a methodological framework, tracing its development from foundational contributions such as Friedman and Savage's (1948) inflected utility function to contemporary debates concerning its explanatory and epistemological status. Adopting a qualitative, comparative, and interpretive methodology grounded in the history and philosophy of economic thought, the study critically reviews classical and contemporary literature to analyze the transition from a formal conception of rationality toward increasingly psychologically and cognitively informed accounts of decision-making. It first examines behavioral, methodological, and philosophical critiques—including bounded rationality, heuristics, moral reasoning, and sociological perspectives—which demonstrate the descriptive limitations of the neoclassical model and redefine the conditions under which its assumptions provide an adequate approximation of observed behavior. It then considers a more recent philosophical reinterpretation of RCT, according to which rational choice is best understood not as a literal account of human cognition but as an idealized scientific modeling framework whose value depends on its explanatory purposes and domain of applicability. The paper argues that these complementary developments reposition RCT from a universal theory of rational behavior to a benchmark model within a theoretically pluralistic approach to economic explanation. In doing so, it contributes to contemporary debates on the evolution of rationality, the methodology of economics, and the future of choice theory.

Keywords: rational choice theory, behavioral economics, philosophy of economics, economic methodology, bounded rationality, choice theory

1. Introduction

Congealing into its modern form in the mid-twentieth century, Rational Choice Theory (RCT) has become the analytical foundation of neoclassical microeconomics and a central framework for contemporary decision and game theory. More broadly, it has profoundly influenced political science, sociology, and other social sciences by providing a formal language for analyzing individual choice and strategic interaction. Rather than describing the psychological processes underlying decision-making, RCT models choice as an optimization problem in which individuals rank alternatives so as to maximize their subjective expected utility under a set of axioms governing rational preferences. Within this framework, rationality is defined not by the substantive content of individual motivations but by the internal consistency of preferences and choices (Arrow, 1951; Sen, 1970, 1993). Its enduring significance therefore lies as much in its methodological contribution as in its substantive claims about human behavior.

This paper focuses on Rational Choice Theory, broadly understood as a methodological framework in which choices are required to satisfy elementary criteria of consistency and coherence (Schilirò, 2012). Its primary aim is to examine this methodological and epistemological framework, whose historical evolution reflects broader developments in the philosophy of economics. Particular attention is devoted to the formal conception of rationality established through the axiomatic method, a classic illustration of which is provided by Friedman and Savage's (1948) S-shaped utility function. By demonstrating that the curvature of an individual's utility function may vary across different levels of wealth, their model explained how a single decision-maker could rationally display both risk-seeking behavior, such as purchasing lottery tickets, and risk-averse behavior, such as purchasing insurance. More generally, this contribution illustrates the capacity of formal utility theory to accommodate apparently inconsistent patterns of choice while preserving the internal coherence required by rational choice models.

The paper then examines the principal behavioral, methodological, philosophical, and sociological critiques that have challenged the descriptive adequacy of classical RCT. Research in psychology and cognitive science—including Simon's (1955) theory of bounded rationality and Tversky and Kahneman's (1979) Prospect Theory—has demonstrated systematic deviations from the assumptions of perfect rationality, highlighting the influence of cognitive limitations, heuristics, and framing effects on decision-making (Graziano & Schilirò, 2012). While some behavioral economists seek to refine neoclassical assumptions by incorporating greater psychological realism (Rabin, 2002), more fundamental critiques argue that mainstream behavioral economics continues to rely on mathematical optimization frameworks that fail to capture the cognitive processes underlying actual decision-making (Berg & Gigerenzer, 2010). Methodological critiques have likewise questioned the empirical status of highly abstract rational-choice models, arguing that their axiomatic structure may weaken their explanatory and predictive power (Green & Shapiro, 1994; Davis, 2018). Beyond these behavioral and methodological concerns, philosophical and sociological critiques challenge the very definition of rationality itself. They argue that reducing rationality to self-interest or preference consistency overlooks the roles of moral

commitments, social norms, emotions, and institutional contexts in shaping individual action, thereby calling into question the identification of rationality with utility maximization alone (Sen, 1977; Elster, 1986, 1988; Boudon, 1998).

Rather than treating these critiques as a straightforward refutation of Rational Choice Theory, this study considers how they have progressively redefined its explanatory status. Contemporary work in the philosophy of economics (Hausman, 1992, 2012; Mäki, 2009) argues that RCT is more appropriately understood as an idealized modeling framework than as a literal theory of human cognition. From this perspective, the value of rational-choice models depends less on their psychological realism than on the explanatory purposes they serve and the institutional, informational, and cognitive conditions under which they provide useful approximations of observed behavior (Herfeld, 2022). These developments suggest that behavioral approaches complement, rather than simply replace, the neoclassical framework by identifying the domains in which its assumptions remain analytically productive and those in which alternative models offer greater explanatory power.

Adopting a qualitative, comparative, and interpretive approach grounded in the history and philosophy of economic thought, this paper traces the evolution of RCT from its classical formulation to contemporary debates concerning its methodological and epistemological status. It argues that the combined influence of behavioral evidence and philosophical reinterpretation has transformed RCT from a universal theory of rational behavior into a benchmark model within a pluralistic framework of economic explanation. In doing so, the paper contributes to ongoing discussions on the nature of rationality, the methodology of economics, and the future development of choice theory.

2. Methodological Approach

This paper adopts a qualitative, comparative, and interpretive methodology grounded in the history and philosophy of economic thought. Rather than conducting empirical testing, it critically examines the theoretical and methodological foundations of Rational Choice Theory (RCT), together with the principal behavioral, sociological, and philosophical critiques that have shaped contemporary debates on rationality and decision-making. The analysis is based on a review of seminal and contemporary contributions, tracing the evolution of choice theory from the axiomatic framework of neoclassical economics to more psychologically informed and epistemologically pluralistic conceptions of rational action.

The methodological approach proceeds in three stages. First, the paper reconstructs the core assumptions of RCT, emphasizing its axiomatic conception of rationality, its formal treatment of individual choice, and its role as the analytical foundation of neoclassical microeconomics and modern decision theory. Second, it comparatively examines the major critiques of RCT arising from behavioral economics, bounded rationality, sociology, and philosophy, highlighting the descriptive limitations of the rational actor model and the challenges posed by cognitive constraints, informational limitations, moral commitments, and social embeddedness. Finally, the analysis turns to recent developments in the philosophy of economics, which reinterpret Rational Choice Theory not primarily as a descriptive theory of human cognition but as an idealized scientific modeling framework whose explanatory value

depends on its intended purpose and domain of applicability.

By integrating these perspectives, the paper seeks to contribute to the literature in two complementary ways. On one hand, it synthesizes the principal theoretical criticisms that have redefined the empirical scope of Rational Choice Theory. On the other, it highlights an emerging epistemological perspective that shifts the debate from whether individuals are rational to the conditions under which rational-choice models provide useful scientific explanations. In doing so, the study situates Rational Choice Theory within a broader, pluralistic framework for understanding rationality and economic explanation.

3. The Rational Choice Theory

Historically, the foundational elements of Rational Choice Theory (RCT) can be traced back to the seventeenth-century philosopher and mathematician Blaise Pascal (1623–1662), who is also celebrated as one of the fathers of probability theory. Rather than analyzing modern markets, Pascal studied the strategic bets that gamblers placed on games of chance. He famously applied this probabilistic framework to a grander human dilemma—the choice of whether or not to believe in God—framing it as a wager where an individual risks their life and soul. In doing so, he developed a conceptual and mathematical foundation for evaluating the costs and benefits of human decisions.

Following Pascal, other philosophers and mathematicians made monumental contributions to the evolution of choice and decision theory—most notably Jacob Bernoulli (1654–1705) in probability theory, his nephew Daniel Bernoulli (1700–1782) through the formulation of expected utility and the introduction of the St. Petersburg Paradox, and Jeremy Bentham (1748–1832) through his foundational work on utilitarianism. In the twentieth century, in his seminal essay “Truth and Probability”—written in 1926 and published posthumously in 1931—the mathematician Frank P. Ramsey provided the first axiomatic treatment of choice under uncertainty, laying the foundation for the modern theory of subjective probability. Ramsey established a mathematically rigorous framework demonstrating that an individual’s internal degrees of belief are not unobservable psychological states, but can instead be precisely measured through their willingness to accept odds on bets. By providing a set of decision-theoretic axioms that jointly imply the laws of probability, his work proved vital to the evolution of Rational Choice Theory (RCT) for three core reasons: the formalization of subjective (Bayesian) probability, the mathematical unification of utility and beliefs, and its foundational role as a precursor to Expected Utility Theory.

In 1928, John von Neumann published a formal mathematical theory of games, demonstrating that optimal strategic behavior emerges from calculations based on the knowledge and objectives of perfectly rational agents. This foundational work on strategic gaming found its most complete expression in the landmark volume *Theory of Games and Economic Behavior* (1944), co-authored by von Neumann and the Austrian economist Oskar Morgenstern.

Von Neumann and Morgenstern (1944) formulated an axiomatic theory of choice under risk, providing a foundational framework for decision-making. Their proposed rational model, Expected Utility Theory (EUT), posits that the decisions of economic agents conform to a

maximization function of the expected utility of outcomes. Within this framework, axioms serve as simple behavioral restrictions or consistency requirements on preferences; by satisfying these axioms, an individual's choice can be formally classified as rational. A decade later, Savage (1954) generalized the von Neumann–Morgenstern objective framework into his renowned theory of subjective expected utility (Note 1). In practice, the theory dictates that individuals consistently choose alternatives that maximize their expected utility—balancing the highest potential gains against the lowest potential losses. This framework achieved widespread success because it vastly simplified the mathematical modeling of decision-making. However, this simplicity comes at a cost: it neglects critical variables inherent to human choice, such as task complexity, the affective-emotional evaluation of alternatives, and the natural limits of an individual's cognitive resources. Historically, Lionel Robbins's (1932) definition of economics—which asserted that economic theory is a deductive science capable of predicting human behavior once an individual's ends, available means, and preferences are known—solidified the conception of economic choice as a strictly logical and coherent outcome of reasoning. By framing choice as a purely deductive exercise, Robbins underlined the foundational role of rationality in economic modeling. Consequently, this perspective reinforced a sharp analytical boundary between economics and psychology, treating the internal mental processes of the decision-maker as outside the scope of economic inquiry (Schilirò, 2011).

The Friedman–Savage (1948) contribution was likewise critical in the affirmation of a theory of choice where pure rationality serves as the core of the theoretical construct. In this view, the descriptor “rational” operates on two distinct levels within the discipline. First, economic science provides a rational representation of reality, meaning it is fundamentally deductive. Under this neo-positivist approach, economics is substantiated by nomological-deductive propositions derived through logical reasoning from unproven axioms. Because this process demands rigorous logic and mathematics, economics is rational not only in the behavior it models, but also in the sense that its propositions are systematically derived through formal, analytical deduction rather than empirical induction—an approach heavily mirrored in classical rational mechanics (Note 2).

Furthermore, economic theory examines rational agents and their subsequent actions. To qualify the admittedly subjective notion of rationality, microeconomics relies on formal models that analyze agent interactions. Because an agent's actions are the direct output of a choice, the rationality of an action is simply the outward manifestation of the rationality of their underlying choice criterion. Ultimately, agents are defined as rational if they possess a coherent criterion of choice, which mathematically implies that their behavior can be represented by a structured system of preferences.

However, while the rationality of actions is subjective—translating purely into a relationship of internal consistency—the structural rationality of those preferences depends entirely on the hypothesized model. Standard theory posits a binary preference system establishing a relationship between pairs of alternatives (such as bundles x and y). To ensure logical coherence, these preferences must satisfy fundamental axioms, most notably completeness and transitivity (Note 3). To bridge the gap between these unobservable mental preferences and

actual market behavior, economics relies on the Axiom of Revealed Preference, which operationalizes this notion of coherence by requiring agents' observed choices to consistently reflect their underlying utility frameworks (Note 4).

In sum, while RCT might appear to imply that economics aims to prescribe which decisions are inherently rational, its descriptive and predictive accuracy remains the subject of heated controversy. Indeed, it is precisely the empirical and cognitive limitations of this rigid framework that underpin the alternative theoretical strands of behavioral and cognitive economics, which seek to reconnect economic models with the realities of human psychology.

3.1 Rational Choice Theory under Certainty

Under certainty, RCT provides an optimal solution, allowing economic agents to evaluate the costs and benefits of competing alternatives. This framework is traditionally rooted in ordinal utility theory, which relies on a well-ordered system of preferences to establish an ordinal utility function. The final choice is determined by maximizing this utility function over a set of feasible actions.

Suppose, for example, that an agent faces a choice between two alternative goods: *A* and *B*. The only relevant differences between *A* and *B* concern their selling price and another parameter, such as size. Options *A* and *B* are therefore distinguished by their multi-attribute outcomes. Naturally, the final choice depends on how attractive these options are based on the utility of their respective outcomes (Keeney & Raiffa, 1976). RCT represents this evaluation by assigning the decision-maker a utility function (usually denoted by *U*) defined over the options, where the utility of an option reflects how the agent values that specific combination of attributes.

Importantly, these utility values are interpreted in entirely subjective terms, reflecting the unique desires and objectives of a specific decision-maker. Ordinal utility theory imposes no constraints on the substance of these preferences; rather, it dictates that a rational decision-maker will invariably choose the option that yields the highest utility ranking (Note 5). For instance, the agent will choose good *A* over good *B* if and only if $U(A) > U(B)$.

Under normal conditions, subjective utility increases with a larger size and a more convenient (i.e., lower) price. However, because it is rarely possible to maximize both attributes simultaneously, the decision-maker faces a trade-off between price and size. In technical terms, resolving this trade-off does not require adding separate utilities together, but rather determining the agent's marginal rate of substitution—evaluating the subjective costs and benefits of each bundle to locate the highest possible rank on their preference scale.

4. Choices Under Uncertainty: Expected Utility

Rational Choice Theory can be extended to more complex situations than those considered above, such as those involving elements of uncertainty or risk. To illustrate this type of case, we usually refer to a gambling scenario. Suppose there are two options to choose from:

Option A: The agent wins 50 euros if a fair die rolls a six; otherwise, he wins nothing.

Option B: The agent wins 10 euros if a fair coin lands heads; otherwise, he wins nothing.

Which of the two bets would a rational decision-maker choose? In this scenario, there are three possible outcomes across the two options: winning nothing, winning 10 euros, or winning 50 euros. A decision-maker can assign a specific subjective utility value to each outcome. However, these individual utilities are insufficient for a comprehensive evaluation of the options because the outcomes are probabilistic rather than certain; they depend on environmental states (the die roll or the coin toss) that lie entirely outside the decision-maker's control.

Under conditions of risk, the metric guiding rational choice is Expected Utility (*EU*). The expected utility of an option is defined as the sum of the utilities of its possible outcomes, each weighted by its corresponding probability of occurrence. According to this definition:

$$EU(A) = [1/6 \square U(50 \text{ euros})] + [5/6 \square U(0 \text{ euros})]$$

$$EU(B) = [1/2 \square U(10 \text{ euros})] + [1/2 \square U(0 \text{ euros})]$$

If the utility values were identical to the corresponding monetary winnings — meaning utility is linear with respect to money —, Option A would be objectively superior because it yields a higher expected monetary value. To see this, it is sufficient to note that $1/6 \square 50 \approx 8.33$, which is greater than $1/2 \square 10 = 5$.

However, given the subjective nature of the utility function, there is no theoretical requirement for this identity relationship to hold. Indeed, a strict linear relationship often fails to capture how individuals empirically value money. If, for example, a person is only interested in earning enough to purchase a drink, 10 euros satisfies that target threshold completely. Consequently, the marginal utility gained between a 10-euro win and a 50-euro win would be very small—or even zero. Option B would thus become the more attractive choice simply because it offers a significantly higher probability of achieving that target utility (1/2 versus 1/6 addable units).

Once again, the theory does not define the rationality of decision-makers by constraining the substance of their subjective values. Instead, it imposes conditions of structural consistency: agents are considered rational insofar as their preferences satisfy the relevant axioms and, under the conditions of expected utility theory, can therefore be represented as maximizing expected utility, regardless of what their underlying preferences happen to be. In this context, RCT is treated in a normative sense—as a prescriptive framework detailing how individuals *should* solve decision problems given the subjective preferences that reflect their actual desires and goals (Schilirò, 2011). From this perspective, a vital question emerges: why should individuals conform to these theoretical principles in real-world environments?

A compelling justification lies in the theory's axiomatic foundations. Take, for example, the transitivity axiom, which dictates that if an agent prefers A to B and B to C, they must logically prefer A to C ($A \square B$ and $B \square C$ implies $A \square C$). Violating this axiom can produce self-defeating outcomes, such as a “money pump,” whereby an external party can systematically extract money through trades that exploit an agent's intransitive preferences.

More broadly, the von Neumann–Morgenstern expected utility theorem shows that, given completeness, transitivity, independence, and continuity, preferences over lotteries can be represented by a utility function that agents maximize in expected terms. If these axioms are violated, such a representation is no longer guaranteed.

RCT under uncertainty also assumes that preferences are invariant to how options are described or expressed (Arrow, 1982), stable over time, and independent of reference points—that is, unaffected by an individual’s transitory financial position.

Consequently, within RCT under uncertainty, agents evaluate alternatives using subjective probability assessments, utility values, and available information.

Although expected utility theory provides an elegant normative framework, its ability to describe actual human behavior is more limited. This limitation was famously illustrated by Maurice Allais (1911–2010), whose thought experiments, known as the “Allais paradox” (Allais, 1953), showed that individuals can make choices that violate the independence axiom.

4.1 The Axiomatic Foundations of Expected Utility

Let us return to the concept of rationality within Rational Choice Theory. An agent is defined as rational if they maximize the value of their expected utility function. This function is guaranteed to exist if the fundamental axioms governing preferences are satisfied. When these axioms hold, if an option x is preferred to y , the expected utility value associated with x will strictly exceed that of y .

The framework relies on three core axioms:

The Ordering Axiom (Completeness and Transitivity): This axiom requires that an agent’s preferences form a complete and transitive ranking. *Completeness* ensures the agent can compare any two alternatives (preferring one over the other or being indifferent between them), while *transitivity* ensures logical consistency across choices. This axiom forms the backbone of choice under certainty, or ordinal utility theory.

The Continuity Axiom: This axiom ensures that preferences do not contain extreme gaps. It states that if an agent prefers x to y and y to z , there must exist a specific probability p such that the agent is exactly indifferent between receiving the intermediate option y with certainty, or playing a lottery that yields the best option x with probability p and the worst option z with probability $1-p$.

The Independence Axiom: This axiom requires that preferences between two outcomes or lotteries remain invariant when mixed with a common third alternative. Specifically, if an agent prefers lottery X to lottery Y , they must also prefer a mixture of X and a third lottery Z over an identical mixture of Y and Z , provided the mixing probabilities are the same.

Therefore, Expected Utility Theory provides a formal framework for making choices under risk by representing an individual’s preferences through a utility function. It essentially converts choices involving uncertain outcomes (gambles) into a single, comparable measure:

expected utility (Schilirò, 2012). When the utility function is defined over monetary wealth, its curvature reflects the individual's attitude toward risk and can take one of three forms:

- 1) Concave, describing the preferences of a risk-averse individual;
- 2) Convex, describing the preferences of a risk-seeking individual;
- 3) Linear, describing the preferences of a risk-neutral individual.

The rationality of an agent's preferences is fundamental to both Rational Choice Theory and Expected Utility Theory. In decision theory, actions are essentially lotteries with uncertain outcomes. Therefore, an agent's preferences over specific actions—such as choosing whether to participate in a given lottery—depend not only on their underlying preferences for the final consequences, but also on how they evaluate the likelihood of those consequences occurring.

Montesano (2005) notes that this creates a complex system where distinct conditions of rationality must be taken into account. To examine the rationality of this overall system of action preferences, one must account for several distinct elements: the set of potential consequences, the set of states of nature that determine the outcome of an action, the agent's specific decision-making environment, and their expectation function (where expectations are generally assumed to be rational, following the rational expectations hypothesis). Ultimately, a system of action preferences is deemed rational if it is built upon a logically sound evaluation of these potential consequences.

Additionally, Expected Utility Theory treats preferences as fixed, completely ignoring the psychological and cognitive processes through which an individual actually arrives at a preference. Instead, the theory restricts its scope to imposing internal coherence requirements—which is precisely how it defines rationality—on the structure of preferences once they have already been formed.

5. Rational Choice vs. Psychological Choice

The previous analysis has shown that mainstream economics traditionally assumed full rationality underpins human choice. However, early critics challenged this approach by highlighting the limitations of the full rationality assumption (e.g., Simon, 1955) and exposing inherent paradoxes within RCT (e.g., Allais, 1953).

Behavioral economics constitutes the most relevant and systemic critique of RCT. In the late 1970s, psychologists Daniel Kahneman and Amos Tversky initiated a profound cognitive-behavioral shift in choice theory by introducing Prospect Theory (1979), offering the first comprehensive alternative paradigm to Expected Utility Theory. This laid the groundwork for modern behavioral economics, a field that integrates psychological insights into the study of economic behavior (Rabin, 1998). Broadly speaking, behavioral economics explores why individuals frequently make irrational decisions, and how or why their actions diverge from the predictions of mainstream economic models. However, the behavioral economics critique of neoclassical rational choice theory concerns not only the substantive issue of whether people behave rationally, but also important methodological questions. Indeed, a central criticism made by many behavioral economists is that rational choice theory

is psychologically unrealistic (e.g., Camerer & Loewenstein, 2004; Rabin, 2002; Thaler, 2016). In particular, Rabin (2002) claims that the more realistic the assumptions about economic actors are, the better economics becomes. Hence, economists should aspire to making assumptions about humans that are as psychologically realistic as possible. This is what behavioral economics has tried to do: incorporate psychologically more realistic notions of human nature into economics. From this perspective, the success of behavioral economics stems from its superior alignment with empirical evidence regarding choice behavior. Ultimately, the lack of realism in neoclassical models is rooted in the rigid axiomatic foundations of rational choice theory.

Accordingly, Kahneman and Tversky's (1979) approach arose from the observation that while the formal elegance of rational choice theory (RCT) holds significant normative value, it severely lacks descriptive validity. Consequently, the cognitive economics research program began systematically testing neoclassical axioms to identify consistent violations of rationality. Through empirical experimentation, this field seeks to account for the systematic deviations of real-world agents while proposing alternative, heuristic-based evaluation systems. Ultimately, cognitive economics moves beyond the strict optimization of neoclassical models, aligning itself instead with the framework of bounded rationality.

Furthermore, a significant point of departure from the classical model of rational choice concerns how people form beliefs. In fact, classical economics assumed that people were optimal processors who updated their beliefs rationally according to Bayes' Theorem. Kahneman and Tversky proved that humans are not natural Bayesians; instead of calculating complex probabilities, our brains default to mental shortcuts to preserve cognitive energy. This insight laid the groundwork for modern behavioral finance, nudge policies, and behavioral economics, explaining why market bubbles, panic selling, and suboptimal consumer choices occur systematically.

In their foundational work, Tversky and Kahneman (1974, 1982) introduced the core framework of heuristics and biases. They identified three primary heuristics that people use to evaluate probabilities and predict values. While each of these mental shortcuts simplifies complex statistical tasks, they also introduce distinct cognitive biases: representativeness, availability, and anchoring and adjustment.

5.1 The Bounded Rationality Concept

Introduced by Herbert Simon (1955) and subsequently developed in his later work (1978, 1985, 1986), the concept of bounded rationality argues that models of rational choice must account for the cognitive and computational limitations of human agents. Simon (1978) argued that this framework is essential because:

"...it is now clear that the elaborate organizations that human beings have constructed in the modern world to carry out the work of production and government can only be understood as machinery for coping with the limits of man's abilities to comprehend and compute in the face of complexity and uncertainty" (p. 354).

As Simon argues, achieving full optimization is constrained by several systemic factors: the

inherent complexity of real-world problems, the chronic availability of only incomplete information, the limited cognitive capacity of agents to process information, strict time constraints, and conflicting organizational preferences. Consequently, although individuals seek to make rational decisions, these constraints prevent them from achieving the substantive rationality assumed by neoclassical economics (Schilirò, 2018).

Instead of optimization, Simon proposes a process of search and satisficing. Within this framework, individuals constrained by cognitive limitations seek solutions that are “good enough” to meet an aspiration level, directly contrasting with the traditional maximization process. He argues that when individuals fail to identify a satisfactory alternative, they modify both their search behavior and their aspiration levels until an acceptable solution is found. The rationality underlying this search process is procedural rather than substantive (Simon, 1986). As Castellani, Di Giovinazzio & Novarese (2010) observe, rationality in this framework characterizes the decision-making process itself rather than the optimality of its outcome. Therefore, in Simon’s view, bounded rationality operates primarily at the procedural level of decision-making.

Consequently, bounded rationality should be understood as a dynamic decision-making process involving search, the adjustment of aspiration levels, learning, and problem representation. These iterative processes are closely linked to experience and memory, enabling individuals to interpret novel situations by drawing analogies with previously encountered problems. Decision-making is therefore viewed as an adaptive cognitive process rather than the solution to a fully specified optimization problem.

Simon thus shifted the study of rationality away from the idealized assumptions of perfect optimization toward the cognitive procedures through which decisions are actually made. This distinction between formal optimization and cognitive process later became central to behavioral economics and continues to inform contemporary philosophical debates concerning whether RCT should be interpreted as a descriptive theory of cognition or as an idealized analytical model.

5.2 Kahneman and Tversky’s Prospect Theory

Kahneman and Tversky’s (1979) Prospect Theory represents one of the most influential challenges to the use of expected utility theory as a descriptive model of decision-making under risk. Rather than rejecting the formal analysis of choice, Prospect Theory questioned whether the axioms underlying expected utility theory adequately captured the cognitive processes through which individuals evaluate uncertain prospects. This distinction is essential because the rational choice tradition has historically combined two functions: providing a normative standard of rational consistency and serving as an idealized representation of actual decision-making behavior.

Within the Rational Choice approach, axiomatic reasoning derives implications from a foundational set of assumptions. According to classical formal logic, valid deductions cannot introduce information beyond what is already contained within the premises. Consequently, axiomatic models generate necessary inferences because their conclusions follow from the

internal structure of the assumptions themselves. While this deductive structure provides analytical rigor and formal consistency, it also limits the informational basis of the model by determining in advance which forms of evidence are theoretically admissible.

Kahneman and Tversky (1979) adopted a different methodological approach by developing a positive, empirically grounded theory of choice under risk. Rather than taking the axioms of expected utility theory as an adequate descriptive account of actual behavior, Prospect Theory was constructed in response to systematic patterns observed in decision-making. Its objective was therefore not to replace normative theories of rational choice, but to provide a cognitively realistic account of how individuals actually evaluate risky alternatives. In this respect, Prospect Theory illustrates the broader methodological shift within behavioral economics from deriving behavior from idealized assumptions toward identifying systematic empirical regularities in human judgment.

Prospect Theory explains several recurring behavioral patterns that systematically depart from the predictions of Expected Utility Theory. Among these are the *certainty effect* (Note 6), whereby individuals disproportionately overweight outcomes that are certain relative to merely probable outcomes; the *reflection effect*, whereby risk preferences reverse depending on whether individuals evaluate gains or losses; and the *isolation effect*, whereby equivalent choices produce different preferences when presented through different representations of the same decision problem. These findings suggest that deviations from expected utility are not random errors but structured features of human decision-making (Schilirò, 2016).

A central contribution of Prospect Theory is its value function, which differs fundamentally from the traditional utility function used in expected utility models. The value function is defined over gains and losses relative to a reference point rather than over absolute levels of wealth. It is typically represented as S-shaped: concave in the domain of gains, implying risk aversion, and convex in the domain of losses, implying risk-seeking behavior. Furthermore, the function is steeper for losses than for gains, capturing the phenomenon of *loss aversion*, whereby losses generate stronger psychological effects than equivalent gains. This framework also incorporates diminishing sensitivity. The subjective difference between smaller changes in wealth is perceived as greater than equivalent changes occurring at higher levels of wealth. For example, the subjective difference between gaining \$10 and \$20 is greater than the difference between gaining \$110 and \$120. This principle applies similarly to losses and helps explain why individuals do not evaluate outcomes according to their objective monetary values alone.

Another essential element of Prospect Theory is *probability weighting*. Individuals do not evaluate probabilities linearly; instead, they tend to overweight unlikely events and underweight moderate and high probabilities. Combined with reference-dependent preferences, this mechanism explains seemingly contradictory behaviors, such as the simultaneous demand for insurance and participation in gambling. Individuals may purchase insurance to avoid a small probability of a severe loss while also purchasing lottery tickets because they overweight the possibility of a large gain.

Tversky and Kahneman (1981) further developed these insights through their analysis of

framing effects. They demonstrated that seemingly irrelevant changes in the presentation of equivalent choices can systematically alter preferences. In particular, decisions framed in terms of gains tend to elicit greater risk aversion, whereas decisions framed in terms of losses tend to elicit greater risk seeking. These findings indicate that preferences can depend on how a decision problem is formulated rather than remaining entirely stable and context-independent, challenging the assumption of preference coherence that occupies a central position in traditional RCT.

However, the significance of Prospect Theory extends beyond identifying behavioral anomalies. Kahneman (2003) emphasized that the theory was designed explicitly as a formal descriptive model of actual choices rather than as a normative theory of rational decision-making. As he states, “one novelty of prospect theory was that it was explicitly presented as a formal descriptive theory of the choices that people actually make, not as a normative model” (p. 1456). This distinction highlights an important methodological divide: expected utility theory provides an idealized benchmark for evaluating rational consistency, whereas Prospect Theory seeks to explain the psychological mechanisms underlying observed behavior (Note 7).

From this perspective, Prospect Theory does not simply invalidate Rational Choice Theory; rather, it demonstrates that different models of rationality serve different explanatory purposes. By highlighting the importance of reference dependence, framing, and loss aversion, Kahneman and Tversky expanded the analytical domain of choice theory and showed that empirical descriptions of decision-making require attention to cognitive mechanisms. Consequently, Prospect Theory represents a crucial step in the broader transition from viewing rationality exclusively as formal consistency toward a more pluralistic understanding of decision-making, in which normative benchmarks and descriptive models coexist.

6. Criticisms and Debates Surrounding Rational Choice Theory

As Davis (2018) argues, Kahneman’s methodological critique of Rational Choice Theory (RCT) is that its top-down, axiomatic structure privileges theory over evidence, thereby weakening the fit between theoretical assumptions and empirical observation. A top-down axiomatic theory tends to acquire a “self-fulfilling” character because it selectively admits evidence that confirms its pre-existing assumptions. This insight is crucial for understanding why a purely realist critique of RCT is often incomplete and potentially ineffective.

However, Davis (2018) finds Kahneman’s critique of the theory-evidence fit insufficient. He favors the approach of Thaler and Sunstein (2008), who emphasize what choosers themselves judge would make them better off. Unlike the deductive logic of RCT, which restricts the informational assumptions that may enter the analysis and abstracts from sources of X-inefficiency, Thaler and Sunstein’s framework expands the informational basis by focusing on individuals’ own judgments regarding what would improve their welfare. Nudges are intended to help individuals achieve outcomes that they would themselves prefer under conditions of full information and careful deliberation. Davis (2018) concludes that RCT is unrealistic not only because its predictions are poorly supported by observations of actual

choice behavior, but also because its axiomatic, logical foundations prevent it from explaining the richer informational base that real-world choice behavior involves.

A related debate concerns whether behavioral economics should be understood as a rejection of, or a modification of, the neoclassical framework. Rabin (2002) does not advocate abandoning the valid insights of neoclassical economics; rather, he argues that they should be supplemented by psychologically more realistic assumptions. This position suggests that the analytical framework of neoclassical economics remains valuable, even if its behavioral assumptions require systematic refinement.

Berg and Gigerenzer (2010), however, argue that behavioral economics has not moved sufficiently far from the methodological foundations of neoclassical economics. In their view, behavioral models often continue to rely on optimization and “as-if” reasoning, adding parameters to utility functions to account for observed biases rather than developing models of the cognitive processes that generate actual decisions. From this perspective, increasing mathematical complexity does not necessarily produce greater psychological realism.

This criticism is closely related to Herbert Simon’s concept of bounded rationality and to the later development of the “fast and frugal” heuristics program. Rather than claiming humans optimize subject to a limited number of biases, this approach emphasizes the simple heuristics people use under conditions of limited time, information, and computational capacity (Schilirò, 2017). It argues that economics should abandon the entire optimization paradigm in order to study the actual, step-by-step cognitive processes driving real-world decisions.

Sen (1977), in turn, provides an essential internal critique of the definition of rationality in RCT. He argues that traditional RCT forces a person to be a “rational fool” by assuming that consistency in choice always reflects self-interest maximization. Sen introduces the concepts of sympathy and commitment, showing that people often act against their personal utility due to moral or social commitments, which RCT struggles to accommodate without becoming tautological.

Boudon (1998) analyzes RCT from a sociological perspective. While he does not reject the theory outright, he argues that it presents significant limitations. For instance, when confronted with empirical failures, RCT proponents tend to expand the definition of “utility” to include non-material elements, rendering the theory tautological and untestable. Seeking to preserve methodological individualism without the restrictive assumptions of *Homo economicus*, Boudon proposes the “Cognitive/Ordinary Theory of Rationality.” Rather than viewing individuals as utility-maximizing calculators, Boudon argues that social scientists should understand them as actors who always have “good reasons” for their actions and beliefs. These reasons include not only instrumental and axiological motivations but also cognitive reasons grounded in what actors regard as objectively true.

Moreover, an empirical critique is provided by Green and Shapiro (1994), who argue that RCT has failed to deliver significant empirical insights in politics because it suffers from methodological pitfalls like post-hoc theory tinkering, selective use of data, and making theories unfalsifiable. This criticism complements Davis’s (2018) observation that the

axiomatic structure of RCT risks becoming self-confirming.

Elster (1986, 1988) offers a qualified critique of RCT, arguing that it is useful only under limited conditions and should not be treated as a universal framework for human behavior. He maintains that the ideal of rationality often fails because preferences can be incomplete or inconsistent, individuals frequently lack sufficient information, and multiple options may appear equally rational. As a result, rationality often underdetermines actual behavior. Furthermore, preferences are not fixed; rather, they are shaped by factors such as institutions, social norms, emotions, and adaptive processes. For Elster, emotions are not merely irrational noise but powerful causal forces that directly influence decision-making. Furthermore, social norms cannot be reduced to simple self-interest; many actions occur because individuals follow norms rather than seek to maximize utility. Because perfect rationality is an unrealistic ideal, actual human behavior routinely departs from the assumptions of RCT. Elster therefore reconceptualizes RCT as one explanatory framework among several rather than a universally applicable theory of action.

Offering an alternative perspective on the criticisms of Rational Choice Theory, Herfeld (2022) revisits some of its major critiques. She argues that while a single “standard view” is widely accepted, economics in fact encompasses several variants of RCT. These variants share a formal, axiomatic structure and the common assumption that human action is intentional, purposeful, and goal-oriented. Consequently, RCT encompasses applications ranging from general choice theory and expected utility theory to rational expectations, while also providing the analytical foundation for game theory, public choice, social choice, and revealed preference theory. Herfeld therefore suggests that abandoning categorical criticisms of RCT, and instead engaging in a more nuanced analysis of its different variants and uses, is a much more fruitful way to advance the debate.

Whereas the preceding criticisms evaluate RCT primarily as a descriptive theory of human behavior, recent work in the philosophy of economics shifts attention to the epistemological status of RCT itself. One promising direction in this literature is to reinterpret RCT primarily as a scientific modeling strategy rather than as a descriptive theory of decision-making. A significant development in contemporary choice theory may not be the discovery that individuals systematically violate rational choice axioms, but the recognition that Rational Choice Theory itself should be understood as an idealized modeling framework rather than an account of human cognition. In this view, pioneered methodologically by Friedman (1953) and subsequently refined by Hausman (1992, 2010, 2012) and Mäki (1991, 2009), the central question shifts from whether individuals are rational to the conditions under which rational-choice models provide adequate explanations. Rationality thus becomes a property of scientific representation rather than of economic agents themselves, opening the way for a pluralistic conception of economic explanation in which neoclassical, behavioral, and ecological models coexist as complementary tools rather than mutually exclusive theories.

7. Conclusions

The foregoing analysis suggests that the significance of Rational Choice Theory (RCT) cannot be assessed solely in terms of its empirical accuracy but must instead be understood in

light of its role as a methodological and epistemological framework for the social sciences. By reducing rationality to the internal consistency of preferences and the maximization of subjective expected utility, RCT established a parsimonious and mathematically rigorous account of individual choice that profoundly shaped modern microeconomics, decision theory, and game theory. Its enduring influence lies not only in its explanatory ambitions but also in the analytical language it provided for formalizing strategic interaction, institutional analysis, and economic behavior.

Yet the very features that account for the analytical elegance of RCT also define the limits of its explanatory reach. As this paper has shown, the incorporation of evidence from psychology, sociology, and cognitive science has exposed persistent discrepancies between the normative structure of rational choice and the descriptive regularities of actual decision-making. Research on bounded rationality, heuristics, framing effects, moral commitments, and socially embedded action demonstrates that departures from the neoclassical model are neither random anomalies nor isolated exceptions, but systematic characteristics of human reasoning. These findings challenge not only the empirical adequacy of RCT but also the identification of rationality exclusively with formal consistency while abstracting from the cognitive and social mechanisms through which choices are formed.

At the same time, the preceding analysis suggests that many criticisms of RCT implicitly assume that it should be evaluated as a descriptive theory of human cognition. Recent work in the philosophy of economics invites a different interpretation. Rather than viewing RCT as a literal account of the psychological processes underlying decision-making, it can be understood as an idealized modeling framework whose value depends on the explanatory purposes for which it is employed. From this perspective, the relevant question is no longer whether individuals are rational in an absolute sense, but under which institutional, informational, and cognitive conditions rational-choice models provide sufficiently accurate and analytically useful explanations.

This reinterpretation helps reconcile the apparent tension between neoclassical and behavioral approaches. Behavioral and psychological research need not be understood as refuting RCT, but rather as refining its domain of applicability and expanding the range of available explanatory models. Accordingly, contemporary choice theory is better characterized as a pluralistic research program than as a contest between mutually exclusive paradigms. Rational choice increasingly functions as a benchmark model—a formal point of departure against which alternative behavioral, ecological, and institutional models are developed and evaluated.

References

- Allais, M. (1953). Le comportement de l'homme rationnel devant le risque: critique des postulats et axiomes de l'école américaine. *Econometrica*, 21(4), 503–546. <https://doi.org/10.2307/1907921>
- Arrow, K. J. (1951). *Social Choice and Individual Values*. John Wiley & Sons.
- Arrow, K. J. (1982). Risk perception in psychology and economics. *Economic Inquiry*, 20,

1–9. <https://doi.org/10.1111/j.1465-7295.1982.tb01138.x>

Berg, N., & G. Gigerenzer, (2010). As-if behavioral economics: Neoclassical economics in disguise? *History of Economic Ideas*, 18(1), 133–166. <https://doi.org/10.2139/ssrn.1677168>

Boudon, R. (1998). Limitations of Rational Choice Theory. *American Journal of Sociology*, 104(3), 817–828. <https://doi.org/10.1086/210087>

Camerer, C. F., & Loewenstein, G. (2004). Behavioral Economics: Past, Present, Future (pp. 3–51). In C. F. Camerer, G. Loewenstein & M. Rabin (Eds.), *Advances in Behavioral Economics*. Princeton University Press. <https://doi.org/10.1515/9781400829118-004>

Castellani, M., Di Giovinazzo, V., & Novarese, M. (2010). Procedural rationality and happiness. *The Journal of Socio-Economics*, 39(3), 376–383. <https://doi.org/10.1016/j.socec.2009.11.004>

Davis, J. (2018). Extending behavioral economics' methodological critique of rational choice theory. *Journal of Behavioral Economics for Policy*, 2(2), 5–9. Retrieved from <https://sabeconomics.org/wordpress/wp-content/uploads/JBEP-2-2-1.pdf>

Elster, J. (1986). *Rational Choice*. New Your University Press.

Elster, J. (1988). The Nature and Scope of Rational-Choice Explanation. In E. Ullmann-Margalit (Ed.), *Science in Reflection* (pp. 51–65). Kluwer Academic Publisher. https://doi.org/10.1007/978-94-009-2957-9_5

Friedman, M., & Savage, L. J. (1948). The Utility Analysis of Choices Involving Risk. *Journal of Political Economy*, 56(4), 279–304. <https://doi.org/10.1086/256692>

Graziano, M., & Schilirò, D. (2011). Rationality And Choices In Economics: Behavioral And Evolutionary Approaches. *Theoretical and Practical Research in Economic Fields*, 2(4), 183–196. Retrieved from <https://journals.aserspublishing.eu/tpref/article/view/1101>

Green, D. P., & Shapiro, I. (1994). *Pathologies of Rational Choice Theory: A Critique of Applications in Political Science*. Yale University Press.

Hausman, D. M. (1992). *The Inexact and Separate Science of Economics*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511752032>

Hausman, D. M. (2010). Philosophy of Economics. In F. Allhoff (Ed.), *Philosophies of the Sciences* (pp. 324–355). Wiley-Blackwell. <https://doi.org/10.1002/9781444315578.ch13>

Hausman, D. M. (2012). *Preference, Value, Choice, and Welfare*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139058537>

Herfeld, C. (2022). Revisiting the criticisms of rational choice theories. *Philosophy Compass*, 17(1), e12774. <https://doi.org/10.1111/phc3.12774>

Kahneman, D. (2003). Maps of Bounded Rationality: Psychology for Behavioral Economics. *American Economic Review*, 93(5), 1449–1475. <https://doi.org/10.1257/000282803322655392>

- Kahneman, D., & Tversky, A. (1979). Prospect theory. An analysis of decision under risk. *Econometrica*, 47(2), 263–292. <https://doi.org/10.2307/1914185>
- Keeney, R. L., & Raiffa, H. (1976). *Decisions with Multiple Objectives: Preference and Value Trade-offs*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139174084>
- Mäki, U. (1991). (Ed.). *Fact and Fiction in Economics: Models, Realism and Social Construction*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511493317>
- Mäki, U. (2009). (Ed.). *The Methodology of Positive Economics: Reflections on the Milton Friedman Legacy*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511581427>
- Montesano, A. (2005). La nozione di razionalità in economia. *Rivista italiana degli economisti. The Journal of the Italian Economic Association*, 1, 23–42.
- Rabin, M. (1998). Psychology and economics. *Journal of Economic Literature*, 36(1), 11–46. Retrieved from <https://www.jstor.org/stable/2564950>
- Rabin, M. (2002). A perspective on psychology and economics. *European Economic Review*, 46(4–5), 657–685. [https://doi.org/10.1016/S0014-2921\(01\)00207-0](https://doi.org/10.1016/S0014-2921(01)00207-0)
- Ramsey, F. P. (1931). Truth and Probability. In R. B. Braithwaite (Ed.), *The Foundations of Mathematics and other Logical Essays*. Routledge & Kegan Paul Ltd.
- Robbins, L. (1932). *Essay on the Nature and Significance of Economic Science*. MacMillan and Co.
- Samuelson, P. A. (1938). A Note on the Pure Theory of Consumer's Behaviour. *Economica*, 5(17), 61–71. <https://doi.org/10.2307/2548836>
- Samuelson, P. A. (1948). Consumption Theory in Terms of Revealed Preference. *Economica*, 15(60), 243–253. <https://doi.org/10.2307/2549561>
- Savage, L. J. (1954). *The Foundations of Statistics*. John Wiley & Sons.
- Schilirò, D. (2011). *Decisions and rationality in economics*. MPRA Paper No. 29477.
- Schilirò, D. (2012). Bounded rationality and perfect rationality: Psychology into economics. *Theoretical and Practical Research in the Economic Fields*, 3(2), 99–108. <https://doi.org/10.2478/v10261-012-0007-0>
- Schilirò, D. (2016). Economics and Psychology. The Framing of Decisions. *Journal of Mathematical Economics and Finance*, 2(3), 77–88. [https://doi.org/10.14505/jmef.v2.2\(3\).05](https://doi.org/10.14505/jmef.v2.2(3).05)
- Schilirò, D. (2017). Psychology into Economics: Fast and Frugal Heuristics. *International Journal of Business Management and Economic Research*, 8(3), 934–939. Retrieved from <https://www.ijbmer.com/vol8issue3.php>
- Schilirò, D. (2018). Economic decisions and Simon's notion of bounded rationality. *International Business Research*, 11(7), 64–75. <https://doi.org/10.5539/ibr.v11n7p64>
- Sen, A. (1970). *Collective Choice and Social Welfare*. Holden-Day.

- Sen, A. (1977). Rational Fools: A Critique of the Behavioral Foundations of Economic Theory. *Philosophy & Public Affairs*, 6(4), 317–344. <http://www.jstor.org/stable/2264946>
- Sen, A. (1993). Internal Consistency of Choice. *Econometrica*, 61(3), 495–521. <https://doi.org/10.2307/2951715>
- Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, 69(1), 99–118. <https://doi.org/10.2307/1884852>
- Simon, H. A. (1978). Rational decision-making in business organizations. Nobel Memorial Lecture, 8 December 1978. *Economic Sciences*, 343–371. Retrieved from <https://www.nobelprize.org/prizes/economic-sciences/1978/simon/lecture>
- Simon, H. A. (1985). *Models of Bounded Rationality* (Vol. 3 Empirically Grounded Economic Reason). THE MIT Press. <https://doi.org/10.7551/mitpress/4711.001.0001>
- Simon, H. A. (1986). Rationality in Psychology and Economics. *The Journal of Business*, 59(4), Part 2, S209–S224. <https://doi.org/10.1086/296363>
- Thaler, R. F. (2016). Behavioral Economics: Past, Present, and Future. *American Economic Review*, 106(7), 1577–1600. <https://doi.org/10.1257/aer.106.7.1577>
- Thaler, R. F., & Cass, S. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.
- Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases: Biases in judgments reveal some heuristics of thinking under uncertainty. *Science*, 185(4157), 1124–1131. <https://doi.org/10.1126/science.185.4157.1124>
- Tversky, A., & Kahneman, D. (1981). The Framing of Decisions and the Psychology of Choice. *Science, New Series*, 211(4481), 453–458. <https://doi.org/10.1126/science.7455683>
- Tversky, A., & Kahneman, D. (1982). Judgment under uncertainty: Heuristics and biases. In D. Kahneman, P. Slovic & A. Tversky (Eds.), *Judgment under Uncertainty: Heuristics and biases* (pp. 3–20). Cambridge University Press. <https://doi.org/10.1017/cbo9780511809477.002>
- Von Neumann, J., & Morgenstern, O. (1944). *Theory of Games and Economic Behaviour*. Princeton University Press.
- Walras, L. (1874). *Elements d'economie politique pure*. R. Pichon et R. Durand-Auzias.

Notes

Note 1. Savage considered himself a follower of Bruno de Finetti's subjective probability theory.

Note 2. Léon Walras (1874), for instance, believed that the laws of economic exchange were analogous to natural laws, specifically those studied in classical mechanics.

Note 3. These two are the standard axioms of consumer theory, which ensure internal logical consistency.

Note 4. The theory of Revealed Preference was developed by Paul Samuelson (1938, 1948) to ensure that observed market choices aligned with this internal consistency. In essence, it inverted traditional axiomatic preference theory: rather than assuming internal preferences to predict behavior, Samuelson's approach observes market choices first and infers the underlying preferences from them.

Note 5. Pure ordinal utility only ranks options as a whole (e.g., $A \succeq B$). Breaking an option down into separate attributes, assigning independent numerical values to those attributes, and summing them up implies that utility has quantifiable, mathematically addable units. This requires a cardinal utility framework or Multi-Attribute Utility Theory, rather than standard ordinal microeconomic frameworks.

Note 6. The certainty effect is the underlying psychological mechanism behind both the Allais paradox and the common ratio paradox.

Note 7. Prospect Theory serves as an alternative framework for understanding risk, positing that the carriers of utility are changes in wealth rather than total states of wealth. In contrast to Bernoulli and his successors, Kahneman (2003) maintains that preferences are determined by attitudes toward gains and losses defined relative to a reference point—a critical element missing from RCT.

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