



## Understanding and Regulating Irrationality in Economic Decision-Making

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### Abstract

The purpose of this article is to examine models of irrational behavior exhibited by economic agents and explore methods for regulating such behavior. To accomplish this, both general and specific research methods were employed. The study identifies three models of individual behavior in economic decision-making: reference, standard, and deviant, which are influenced by a combination of internal and external factors. The main regulatory approaches are analyzed through the lens of two theoretical frameworks: behaviorism and ethology. The article concludes that behaviorist methods are suitable for straightforward decisions involving quick feedback and easily measurable outcomes. Conversely, for complex decisions lacking feedback and involving challenging or indeterminable outcome evaluations, cognitive ethology offers more effective tools, such as choice architecture and institutional design.

**Keywords:** Institutions, Behaviorism, Ethology, Decision-making, Economic theory, Institutional design

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### Introduction

Contemporary economic theory, whether classical or alternative, remains insufficient in comprehensively capturing the complexities of consumer behavior, decision-making, and preference formation [1–4]. Given this limitation, there is a growing need to critically examine and enhance theoretical and practical approaches to understanding and guiding consumer decisions. This reexamination requires a multidisciplinary framework that merges insights from behavioral economics and new institutional theory with findings from neuroscience, psychology, and sociology.

One of the main reasons such a review is vital lies in the dynamic influence of the social environment, which often pushes individuals away from rational decision-making toward more erratic or irrational choices. This article addresses that phenomenon by focusing on the behavioral tendencies of economic agents and the various methods used to influence or regulate those behaviors. Scholars across disciplines—from Auzan and Kahneman to Thaler, Skinner, and Veblen—have contributed to this field. However, due to the ongoing changes in the social and economic contexts that shape individual behavior, patterns of consumption and decision-making continue to shift, necessitating continuous theoretical refinement.

### Materials and Methods

This study employs a combination of both general and targeted methodological approaches. Among the general methods, analytical and synthetic techniques were applied to organize and interpret theoretical content relevant to the topic. In addition, specialized methods were used, focusing on the examination of socio-psychological and meta-economic data. These data were

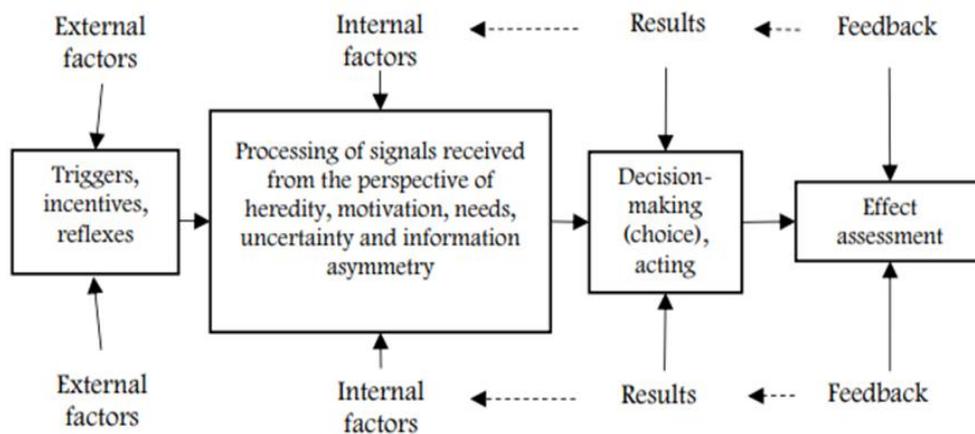


essential in identifying and characterizing the distinct behavioral models of economic agents, as defined by the author, and in evaluating the methods available for regulating such behaviors.

## Results and Discussion

The investigation of human behavior—particularly the cognitive processes that drive or influence decision-making—continues to attract scholarly attention across multiple disciplines, ranging from psychology and sociology to economics, including fields such as institutional economics, neuroeconomics, and econophysics [5–8]. Historically, from the foundations of classical economic theory to the seminal contributions of T. Veblen in the late 1800s (Veblen, 2011), economic behavior has been studied through the lens of the so-called "homo economicus" model [9]. This model posits that economic agents act rationally with the aim of maximizing personal benefit, such as income or profit.

However, Veblen (2011) challenged this paradigm by demonstrating that institutional factors often lead agents to behave irrationally [9]. This deviation is reflected in phenomena such as conspicuous consumption and indulgent lifestyles. In such cases, the institutional and social context—not purely rational calculation—drives decision-making. Moreover, the presence of external uncertainty and information asymmetry contributes to opportunistic behavior, which has become a recognized element of the standard model. This model further asserts that in conditions of pronounced uncertainty, agents prioritize minimizing risk, frequently resorting to irrational strategies. Thus, the standard model presents economic behavior as context-dependent, particularly under conditions of risk and imperfect information (**Figure 1**).



**Figure 1.** The standard model of economic agents' individual behavior [10, 11]

Beyond the standard behavioral model, there exists a *deviant model* that highlights atypical patterns in the behavior of economic agents. This model places significant emphasis on the role of institutions—both formal rules and informal norms—in shaping the consistency and predictability of economic behavior. While formal institutions are typically designed to uphold public order and ensure societal stability, informal or convergent institutions complement this function by reinforcing behavioral norms within a given context.

Nevertheless, institutional structures are not static; they evolve over time. This adaptability allows room for maneuver and transformation. Formal institutions, however, can sometimes become dysfunctional or lose legitimacy, particularly in authoritarian regimes. In such cases, informal (or divergent) institutions may emerge to replace or mimic formal structures. Deviant behavioral models often arise in these contexts and are generally classified into two categories [12–14]:

1. **Conforming deviant behavior**, where economic agents accept a destructive institutional framework as normative. This leads to ingrained social practices and thought patterns that, while normalized within the community, are viewed as antisocial from an external perspective.
2. **Nonconforming deviant behavior**, where individuals reject the destructive institutional norms. This form of behavior is typically labeled antisocial within the context of the community, yet is interpreted as prosocial by outsiders.

In addition to these, a third category—**protest behavior**—emerges in settings where institutions are robust and constructive. These models represent a conscious deviation intended to challenge and reform existing structures.

Ultimately, deviant behavior models serve to identify the origins and drivers behind deviations from institutional norms. Without appropriate regulation or correction, such behaviors risk undermining social order through widespread replication. In this context, researchers unfamiliar with institutional and new institutional economics, as well as insights from neuroscience and behavioral economics, may hastily categorize these behaviors as purely irrational. However, the distinction between rational and irrational behavior is nuanced and highly individual. Elements of both can be found across all three models—

reference, standard, and deviant. For a comprehensive analysis, it becomes essential to define what constitutes *rational behavior* for economic agents in a way that transcends these categorizations.

In alignment with the views of R. Thaler and K. Sunstein, rational behavior exhibited by economic agents can be defined through objective evaluation criteria [15, 16], namely:

1. **Deliberation over impulsivity** – prioritizing thoughtful, reasoned decisions over immediate, spontaneous reactions.
2. **Long-term utility and social fairness** – decisions and subsequent actions aim to optimize long-term subjective utility while also being ethically sound and socially equitable. This includes avoiding harm to others, preserving environmental integrity, and safeguarding the rights and resources of future generations.

This interpretation of rational behavior aligns closely with the principles of *social justice* as articulated by Rawls (1999) [17]. That is, economically rational individuals make decisions that are not only efficient but also socially, ethically, and environmentally responsible—addressing both present challenges and future implications. In institutionally stable societies, such behavior tends to proliferate through social learning mechanisms like imitation. However, in less developed institutional contexts, where informal norms often outweigh formal rules, such conduct may paradoxically be perceived as irrational.

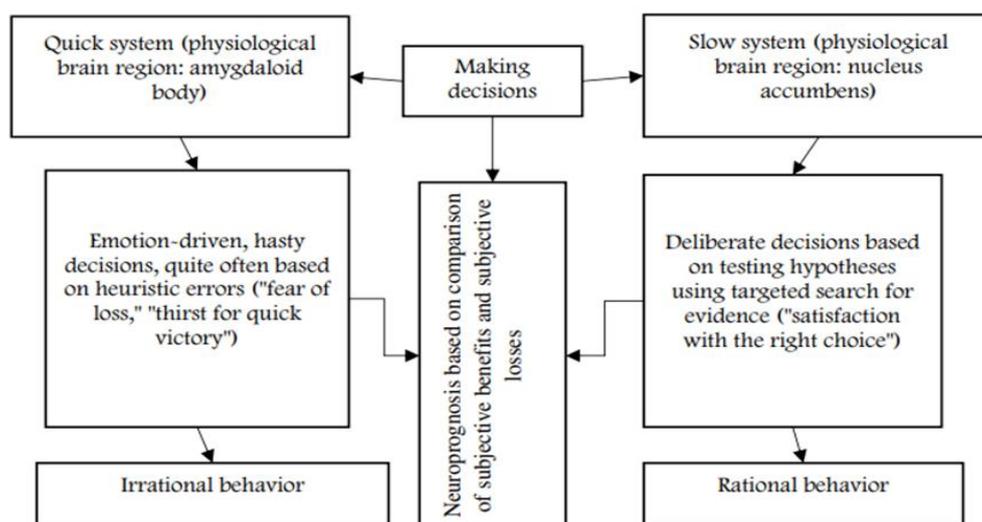
To further refine the understanding of rationality in economic behavior, it becomes necessary to consider the neurological underpinnings—drawing on biological and physiological insights.

Within the *standard model*, decision-making is portrayed as a cognitive process initiated by external information and subsequently filtered through factors such as genetic predispositions, internal motivations, perceived needs, risk evaluation, and informational asymmetries—many of which may operate subconsciously. These processes unfold through either a fast or slow cognitive system (**Figure 2**).

The **fast system** is generally responsible for intuitive, impulsive, and often irrational decisions, while the **slow system** supports deliberate, analytical, and rational thinking. Importantly, neuroprognostic mechanisms, which allow for anticipatory and strategic thinking, are typically absent in the fast system.

Hence, it can be concluded that the distinction between rational and irrational behavior in economic agents is both **context-dependent** (varying across standard and deviant models) and **neuro-psychosocial** in origin, shaped by a blend of cognitive processing, environmental stimuli, and institutional frameworks.

This realization raises a critical issue: the regulation of irrational behavior. Such regulatory efforts are especially crucial within institutional systems, where unchecked irrationality could undermine social cohesion, economic efficiency, and long-term sustainability.



**Figure 2.** Neuropsychological circuit of making decisions by economic agents, determining their follow-up individual behavior [11, 15, 18]

The emergence of various scientific and practical approaches to regulating the behavior of economic agents can be traced to economically and socially advanced countries, where strong emphasis on personal and civil liberties restricts direct interference in individual economic and social decisions. In the late 19th and early 20th centuries, two theoretical models began to take shape, both of which later played a significant role in shaping regulatory strategies for economic behavior. Behaviorism posited that behavior is uniform and can be shaped or suppressed through mechanisms of positive or negative reinforcement, a view championed by Skinner through his theory of operant learning [19]. In contrast, ethology—particularly cognitive ethology—argued that behavior is diverse and influenced by both internal factors like heredity, needs, and

motivation, and external ones such as stimuli, incentives, uncertainty, and information asymmetry, as suggested by Eibl-Eibesfeldt [20].

Cognitive-ethological theory eventually proved more robust in explaining both standard and deviant behavioral models. Nevertheless, the contributions of behaviorism remain significant, particularly in shedding light on impulsive or spontaneous economic behaviors. These insights helped lay the groundwork for marketing as a distinct field, which has long utilized operant learning principles to influence consumer behavior through rapid decision-making, fear-based appeals, and heightened interest in consumption.

Rapid decision-making systems are also exploited by various actors—such as cult leaders, scammers, and figures in both legal and illegal entertainment industries—to shape economic behavior. It is, however, mistaken to assume that only fast cognitive processes lead to irrational decisions. Research over the past decade has repeatedly confirmed a strong correlation between intelligence and rational behavior, indicating that slow, deliberate decision-making also plays a crucial role. For predictable or group-action scenarios, the tools derived from behaviorism—like operant conditioning—remain effective in promoting rational, opportunistic decision-making.

More complex tools, however, such as choice architecture and institutional design, are better grounded in cognitive-ethological principles. These approaches draw on both fast and slow cognitive systems to forecast the neurological outcomes of behavior in uncertain or probabilistic contexts. They are applied through mechanisms like social learning, cultural reengineering, institutional frameworks, and the commodification of rational behavior.

## Conclusion

First, in institutionalized societies, rational economic behavior aligns with pro-social values and reflects Rawls's theory of social justice. Second, rational behavior operates within traditional frameworks, relying on both emotional (fast) and conscious (slow) neurocognitive processes for decision-making. Third, behaviorism's key contribution lies in its operant learning model, which remains relevant for managing behavior when outcomes are clearly identifiable. Fourth, for more complex, long-term decisions where outcomes are uncertain, regulatory tools should draw on cognitive-ethological theories that engage both decision-making systems.

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