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Regulating Irrational Behavior in Economic Agents: Models and Strategies

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Abstract

This paper aims to examine the models of irrational behavior exhibited by economic agents and the methods for regulating such behaviors. General and specific research methods were employed to achieve this objective. The paper presents three behavioral models—reference, standard, and deviant—demonstrating how economic agents make decisions under the influence of a combination of internal and external factors. It examines the key regulatory approaches to managing irrational behavior using two core concepts: behaviorism and ethology. The study concludes that behaviorist strategies are most effective for simple decision-making scenarios with quick feedback and easily identifiable outcomes. For more complex decisions without immediate feedback and challenging-to-assess effects, cognitive ethology is recommended, especially through tools such as choice architecture and institutional design.

Keywords: Economic Agents, Behavior, Institutions, Ethology, Decision-Making, Behaviorism, Economic Theory, Institutional Design, Deliberate Choice.

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Introduction

At present, neither conventional nor heterodox economic theories can completely account for the unique aspects of consumer behavior, decision-making, or the process of choice [1-3]. Therefore, there is a growing need to explore and reassess the various theoretical concepts, methodologies, and practices involved in managing consumer behavior and decision-making. This exploration calls for an interdisciplinary approach, incorporating insights from behavioral economics, new institutional economics, as well as neural, social, and psychological sciences.

The significance of revisiting these theories is highlighted by the influence of social contexts on individual decisions, which can lead to irrational behavior instead of rational choices. This paper delves into this issue by analyzing the behavioral patterns of economic agents and the various strategies to regulate such behaviors. Several scholars, such as Auzan [4], Bloom *et al.* [5], Burns and Roszkowska [5], Chakrabarti *et al.* [6], Kahneman [7], Eibl-Eibesfeldt [8], Skinner [9], Taler and Sunstein [10], Thaler [11], and Veblen [12], have addressed this topic. However, as the socioeconomic environment continues to evolve, so too do the consumer behavior patterns of economic agents.

Methods and Materials

The approach employed in this article is based on a combination of both general and specific research methods. General methods include analytical and synthetic techniques, which facilitated the organization of theoretical insights related to the issue being discussed. Specific methods focus on analyzing socio-psychological and meta-economic data, which are crucial for understanding the behavioral patterns of economic agents as defined by the author, as well as the strategies for regulating such behaviors.

Results and Discussion

The study of human behavior and the cognitive processes behind decision-making has long been a focal point across a wide array of scientific disciplines, including psychology, sociology, economics, and various specialized fields such as institutional economics, neuroeconomics, and econophysics [4, 6, 13, 14]. From the advent of classical economic theory to the work of T. Veblen in the late 19th century [12], human economic behavior has traditionally been studied through the lens of the "homo economicus" model. This model posits that economic agents make decisions solely to maximize objective benefits, such as income or profit.

Veblen [12] offered a critique of this traditional model, arguing that institutional factors can drive economic agents to act irrationally. Such behavior can manifest in forms like conspicuous consumption or extreme hedonism. External uncertainty and information asymmetry lead to opportunistic behavior among economic agents, challenging the assumptions of the standard model. Under conditions of high uncertainty, an economic agent will often prioritize reducing risks, acting in ways that may appear irrational. Thus, the standard model, while valuable, needs to be supplemented with the understanding that economic agents behave irrationally in situations involving extreme uncertainty (**Figure 1**).

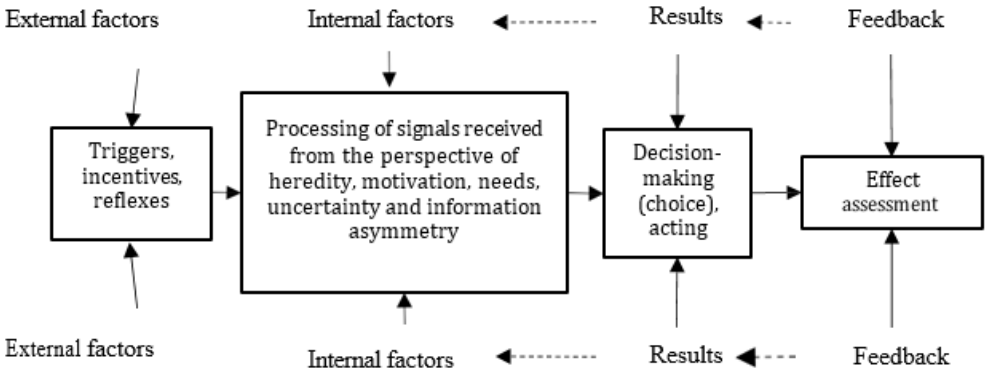

Figure 1. The standard model of economic agents' behavior (Compiled by the author using sources: Henry [15]; Klyucharev *et al.* [16])

In addition to the standard model, a deviant model is used to describe abnormal behaviors exhibited by economic agents. The deviant model emphasizes the impact of institutions (rules and regulations that influence both the regularity and behavior of economic agents). Formal institutions are designed to ensure public order and stability, while informal or convergent institutions play a role in maintaining that stability. However, there is always potential for institutional evolution. Formal institutions may sometimes be harmful (as seen in totalitarian regimes) or lack authority, which can lead to the emergence of informal institutions that either replace or imitate formal ones. Deviant models are typically divided into two main categories [5, 17, 18]:

1. **Conforming behavioral models:** In these models, economic agents accept the destructive institutional structure of their community as the norm, resulting in behavioral acts that, although accepted within the community, may be considered antisocial from an external perspective.
2. **Nonconforming behavioral models:** These models involve economic agents who oppose the destructive institutional framework. While this behavior is viewed as antisocial within the community, it is seen as prosocial by outsiders.

Additionally, another category of behavior models can be observed, generally emerging within a well-developed and constructive institutional environment:

Protest models: These deviant models explain the causes and factors behind behavioral deviations from the institutional norm. Such behavior often requires correction to prevent the destabilization of society due to its replication.

In this context, many scholars—who may not fully grasp the significance of institutional economics, new institutional economic theory, or recent advancements in neuroscience and behavioral economics—frequently discuss the irrational behaviors of economic agents. However, the balance between rational and irrational behavior is a complex issue that can be examined in the context of reference, standard, and deviant models. To gain a clearer understanding, it's essential to define what constitutes rational behavior in the context of economic agents across these models.

Agreeing with Taler and Sunstein's [10] perspective, rational behavior can be defined as:

1. **Correctness/deliberate decision-making:** This involves rejecting impulsive actions in favor of more thoughtful and considered choices.
2. **Utility:** The decisions made, and the subsequent actions, aim to maximize long-term subjective usefulness. These decisions should also align with social justice by ensuring that they do not infringe upon others' rights, harm the environment, or deplete resources for future generations [10, 11].

The concept of rational behavior is inherently linked to Rawls' idea of social justice [19], meaning that rational decision-making is not only environmentally and ethically responsible but also forward-looking and relevant to addressing current issues. Such behaviors can be quickly replicated in societies with established institutions through the transmission of social signals. In contrast, in societies where informal institutions have more influence than formal ones, these behaviors may be perceived as irrational.

To further clarify the concept of rationality in economic agents' behavior, a neurological (biological and physiological) approach should be applied. In the standard model, decisions are made after processing external information, considering factors like heredity, motivation, needs, uncertainty, and information asymmetry—often without conscious awareness. This process is carried out through either a fast or slow decision-making system (**Figure 2**).

The fast system tends to lead to irrational decisions, while the slow system fosters rational ones. Since both systems contribute to the decision-making process, neuro-prognosis is employed, which isn't part of the fast system. At this stage of the research, it can be concluded that both rational and irrational behavior in economic agents are context-dependent—applicable to both the standard and deviant models—and result from the neuro-psychosocial decision-making process. Therefore, the regulation of irrational behavior becomes particularly significant in institutionalized communities.

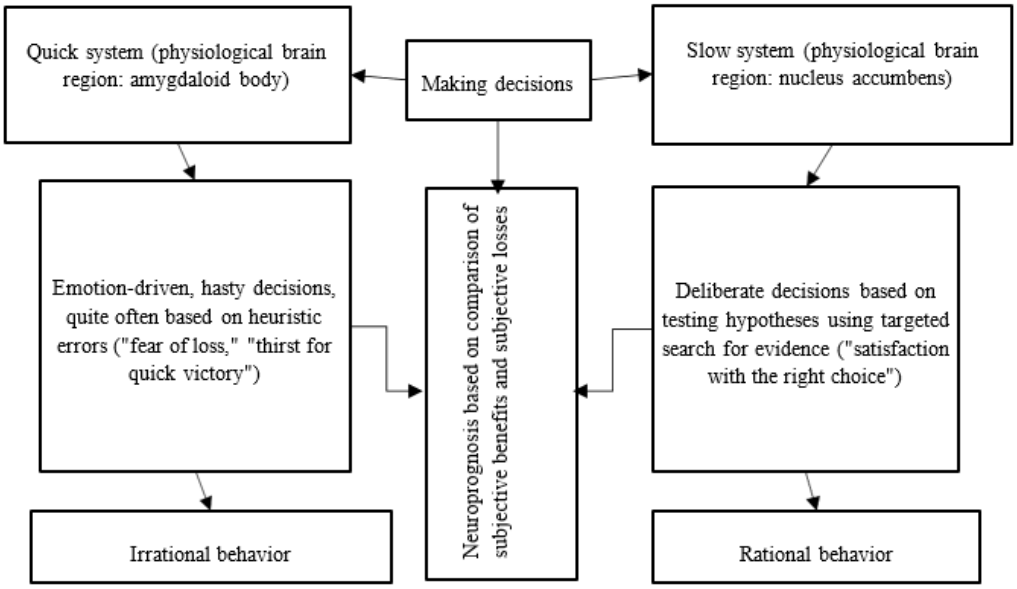

Figure 2. Neuropsychological circuit of making decisions by economic agents, determining their follow-up individual behavior (Compiled by the author using sources: Kahneman [7]; Klyucharev et al. [16]; Taler and Sunstein [10])

This also explains why various scientific and practical approaches to regulating the behavior of economic agents have emerged in economically and socially advanced countries. These countries, where individual and civil liberties are highly valued, generally avoid direct interference with personal social or economic choices. In the late 19th and early 20th centuries, two theoretical frameworks began to develop almost simultaneously, both of which were later used to regulate economic agents:

1. Behaviorism: This theory argues that behavior is homogenous and, therefore, its frequency can be increased, decreased, or eliminated through positive or negative reinforcement (operant conditioning) [9].
2. Ethology (specifically cognitive ethology): This theory proposes that behavior is varied, shaped by both internal factors (like heredity, motivation, and needs) and external factors (such as triggers, incentives, uncertainty, and information asymmetry) [8].

The cognitive-ethological approach proved to be more robust, as it successfully described human behavior both within the standard model and the deviant model. However, the contributions of behaviorism should not be overlooked, as their research greatly enhanced our understanding of impulsive (spontaneous) economic behavior. This understanding led to the development of marketing as a new scientific field in economics, which has long employed operant conditioning to influence

consumers through rapid decision-making processes, exploiting their fear of need and stimulating demand for specific products.

Moreover, various actors—such as cult leaders, developers of fraudulent schemes, and those in both the legitimate and illegitimate entertainment industries—can influence economic agents' behavior. It would be a mistake to think these influences cannot affect decision-making and lead to irrational behavior, even through the slow decision-making system. Studies conducted over the past decade have repeatedly shown a link between intelligence and rational behavior, indicating that the slow decision-making system requires ongoing training. In this context, behaviorist tools can be useful, particularly for:

1. Making opportunistic (routine) decisions for situations where the outcomes are predictable and identifiable.
2. Making opportunistic decisions when group prosocial actions need to be mobilized.

On the other hand, more complex tools such as choice architecture and institutional design should be based on cognitive-ethological principles. These tools incorporate both decision-making systems to assess the neurological consequences of behavioral actions in situations where the effects are hard to reliably identify in the short term. However, they can justify the expected future utility for each economic agent individually. These approaches are implemented through social learning, reengineering cultural norms, shaping formal and informal institutions, and the commodification of rational behavior.

Conclusions

To summarize the key points of the article, the following observations can be made:

• Firstly, from the perspective of institutionalized communities, the rational behavior of economic agents is inherently pro-social and aligns with Rawls's theory of social justice.

• Secondly, rational behavior within the traditional model assumes decision-making is guided by neuro-prognosis, utilizing both fast (emotional) and slow (deliberate) decision-making processes.

• Thirdly, the main contribution of behaviorism is the operant learning model, which encourages the desired behavior (in this case, rational behavior). The behavioral approach is most applicable for regulating behavior or making opportunistic decisions where the outcomes are reliably identifiable.

• Fourthly, the cognitive-ethological approach should be applied when using more advanced tools to regulate irrational behavior (such as choice architecture and institutional design), especially in situations involving long-term decisions, where the effects are probabilistic and not easily predictable.

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