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Unpacking Rationality in Security Studies: Beyond Expected Utility and Towards Enriched Understanding of Strategic Decision-Making

Dr. Emily Harper

Department of War Studies, King's College London, UK

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ABSTRACT

The concept of rationality is foundational to the study of international security, often serving as a primary lens through which to analyze state behavior and strategic choices. While expected utility theory has provided a powerful framework for understanding rational decision-making, its limitations in capturing the complexities of real-world security dilemmas have become increasingly apparent. This article critically examines the prevailing definitions of rationality within security studies, particularly the dominance of expected utility theory, and advocates for a more nuanced, theory-driven approach to understanding strategic choices. Through a detailed re-examination of the Vietnam War, this analysis demonstrates how adherence to a narrow definition of rationality can obscure critical insights into policy failures and successes. By integrating insights from behavioral economics, cognitive psychology, and historical analysis, this paper argues for an enriched understanding of rationality that acknowledges the influence of uncertainty, cognitive biases, and the evolving nature of information in strategic environments.

Keywords: Rationality, Security Studies, Expected Utility Theory, Vietnam War, Strategic Decision-Making, Cognitive Biases, Uncertainty.

INTRODUCTION

The bedrock of much international relations theory, particularly within security studies, rests upon the assumption of rational actors. States, it is posited, act rationally to maximize their interests and achieve their objectives in a complex and often perilous international arena [23, 32]. This notion of rationality, deeply rooted economic theory, has predominantly been in operationalized through the framework of expected utility theory (EUT) [15, 27, 28, 36]. EUT posits that rational actors will choose the option that yields the highest expected value, calculated by weighting the utility of each possible outcome by its probability [15, 27]. This seemingly straightforward and elegant framework has provided significant analytical leverage, enabling scholars to construct formal models and predict state behavior in various security contexts [13, 32].

However, the persistent failures of policy, the emergence of seemingly irrational state actions, and the inherent

complexities of strategic environments have prompted a re-evaluation of this foundational assumption. Critics argue that EUT, while analytically powerful, often simplifies the psychological and informational realities of decision-making under uncertainty [7, 14]. Real-world strategic choices are rarely made with perfect information, clear preferences, or unbiased assessments of probabilities [7]. The "fog of war," as famously described, is not merely a metaphor but a tangible impediment to perfectly rational calculation [4]. The question then arises: what constitutes rationality in security studies, and how can we move beyond a restrictive EUT framework to encompass the richness and challenges of strategic decision-making?

This article seeks to address these questions by arguing for a more expansive and theory-driven understanding of rationality in security studies. It contends that a narrow focus on EUT can lead to an incomplete or even misleading interpretation of historical events and

contemporary challenges. Instead, it advocates for an approach that incorporates insights from behavioral economics, cognitive psychology, and a deeper appreciation for the role of subjective probability and judgment in strategic environments. The Vietnam War, a conflict frequently analyzed through the lens of rational choice, serves as a crucial case study to illustrate the limitations of a purely EUT-driven perspective and to highlight the explanatory power of a more nuanced understanding of rationality. By examining the decisionmaking processes during this pivotal conflict, we can illuminate how deviations from pure EUT, driven by cognitive biases, evolving information, and the inherent uncertainties of war, profoundly shaped outcomes.

METHODS

This study employs a qualitative, historical case study approach to analyze the decision-making processes during the Vietnam War, with a specific focus on the concept of rationality. The methodology involves a critical re-examination of existing scholarly works, primary historical documents, and official memoirs related to the conflict. The analysis is structured to:

1. Deconstruct Expected Utility Theory: First, a thorough review of the core tenets of expected utility theory and its application within security studies is undertaken. This involves examining how EUT conceptualizes preferences, probabilities, and utility, and how these elements are presumed to guide rational strategic choices [15, 27, 28, 36]. The limitations of EUT in capturing the complexities of real-world decision-making are also explored, drawing upon critiques from behavioral economics and cognitive psychology [7, 14]. The analysis considers the historical development of probabilistic thought, from early philosophical theories to modern subjective probability [5, 12, 29].

Analyze Decision-Making in the Vietnam War: 2. Second, the study delves into key decision points and strategic assessments made by U.S. policymakers during the Vietnam War. This includes examining the initial interventions, escalation decisions, and the eventual withdrawal. Specific attention is paid to how intelligence assessments were formed and communicated [10, 26], how probabilities of success or failure were estimated [18, 20], and how these estimations influenced policy choices [7]. The analysis considers the perspectives of key decision-makers, drawing on their memoirs and official accounts, such as those by Robert McNamara [22] and the comprehensive historical accounts like The Irony of Vietnam [11]. The study also considers the broader "system effects" that influenced decision-making within the complex political and social environment [16].

3. Identify Deviations from Pure Expected Utility: Third, the study systematically identifies instances where U.S. decision-making in Vietnam appears to diverge from the predictions of a strict EUT model. This involves

looking for evidence of cognitive biases, such as overconfidence [22], anchoring, or confirmation bias, that might have influenced probability assessments or utility calculations [7, 9]. The role of uncertainty, ambiguity, and the evolving nature of information in shaping perceptions and choices is also a key area of investigation, acknowledging that war is inherently a realm of chance and imperfect information [7, 17]. The study examines how the communication of probability, whether in "words or numbers," might have contributed to these deviations [6, 18].

4. Propose a Theory-Driven Framework for Rationality: Finally, based on the insights derived from the Vietnam War case study and the theoretical critiques of EUT, the study proposes a more encompassing framework for understanding rationality in security studies. This framework emphasizes the importance of theory-driven reasoning, acknowledging the inherent subjectivity in probability assessments [5, 12, 15, 29] and the influence of cognitive heuristics on decision-making [33, 34]. It also considers the impact of organizational dynamics and bureaucratic politics on strategic choices, recognizing that a state's "thinking" process is a complex interplay of individual and institutional factors [16, 23]. The framework will draw upon the "behavioral revolution" in international relations, which highlights the importance of psychological and cognitive factors [14], and the concept of "protean power" which explores uncertainty and the unexpected [17].

The selection of the Vietnam War as a case study is deliberate. It is a conflict that has been extensively studied, providing a rich empirical basis for analysis. Furthermore, it is a conflict where the concept of rationality, and perceived irrationality, has been a central theme in many post-mortems [11, 22]. By examining the decision-making processes during this period, this study aims to contribute to a deeper and more nuanced understanding of strategic rationality in security studies.

RESULTS

The analysis of the Vietnam War through the dual lenses of expected utility theory and a more theory-driven understanding of rationality reveals compelling insights into the complexities of strategic decision-making. While elements of rational calculation, as defined by EUT, were undoubtedly present, the pervasive influence of uncertainty, cognitive biases, and the dynamic nature of information consistently challenged and often undermined purely utilitarian approaches.

The Limitations of Expected Utility in Vietnam

From the outset, U.S. involvement in Vietnam can be interpreted as an attempt to maximize expected utility: preventing the spread of communism (a high utility outcome) at an acceptable cost. However, the application of EUT proved problematic in several key areas:

Probabilistic Assessment and Uncertainty: A core tenet of EUT is the ability to assign accurate probabilities to outcomes [5, 15, 29, 36]. In Vietnam, accurate probabilistic assessment was a significant challenge. Intelligence agencies struggled to gauge the true strength and resolve of the North Vietnamese and Viet Cong forces [26]. Estimates of victory or defeat were often expressed in vague qualitative terms, rather than precise numerical probabilities [18], which behavioral research suggests can lead to misinterpretations and overconfidence [6]. For instance, despite numerous official reports suggesting a deteriorating situation, policymakers often maintained an optimistic outlook, perhaps influenced by a desire to avoid perceived losses or by an overestimation of their own capabilities [22]. This aligns with findings that decision-makers can exhibit a preference for imprecise probabilities in certain contexts, particularly when facing undesirable outcomes [9]. The inherent "fog of war" [4] made clear, objective probabilistic assessment a near impossibility, forcing reliance on subjective judgments [7].

Defining Utility and Preferences: The "utility" of different outcomes was also subject to considerable interpretation and evolution. While preventing communist expansion was a primary objective, the definition of "victory" shifted over time, from nationbuilding to simply preventing an overt defeat [11, 22]. The utility of committing more resources versus withdrawing was constantly re-evaluated, often influenced by political considerations and domestic pressures, which are difficult to quantify within a strict EUT framework [11, 16, 22]. The "system worked" argument, positing that the U.S. achieved its limited objectives, highlights the retrospective re-definition of utility [11].

Cognitive Biases and Heuristics: The decisionmaking process in Vietnam was demonstrably influenced by various cognitive biases, pulling policymakers away from a purely rational EUT calculation. Robert McNamara, a figure often associated with a quantitative, rational approach, later acknowledged the systematic failures in judgment [22]. For example, the phenomenon of "groupthink" or confirmation bias likely contributed to an echo chamber effect, where dissenting opinions or negative assessments were downplayed or ignored in favor of information that supported existing beliefs [16, 22]. Overconfidence, a common cognitive bias, was also evident in the belief that American military power could overcome the complexities of counterinsurgency warfare [22]. This overconfidence is well-documented in studies of expert political judgment [33, 34]. The "sunk cost fallacy" also played a significant role, where increasing investment in the war was justified by previous expenditures, rather than a fresh evaluation of expected future utility [16, 22]. The value of precision in geopolitical forecasting, often overlooked, could have mitigated some of these biases [8, 9].

The Value of Theory-Driven Reasoning and Enriched Rationality

A more expansive, theory-driven understanding of rationality, which acknowledges the behavioral and psychological realities of decision-making, offers a more robust explanation for the choices made during the Vietnam War.

Subjective Probabilities and Judgment: Instead of objective probabilities, decision-makers in Vietnam operated with subjective probabilities, influenced by their experiences, beliefs, and biases [5, 15, 29]. The intelligence community, while aiming for objective assessment, often used "words of estimative probability" which could be interpreted differently by various consumers, leading to disparate understandings of the likelihood of events [6, 18]. The ability of "superforecasters" to make more accurate probabilistic predictions highlights the importance of specific cognitive traits and systematic approaches to judgment, which were often lacking in the Vietnam era [3, 24, 34]. The challenge of accurately forecasting strategic outcomes like proliferation underscores the difficulty of such judgments [25].

• Bounded Rationality and Heuristics: Decisions were often made under conditions of "bounded rationality," where information processing capabilities and time constraints limited the ability to conduct exhaustive EUT calculations [16]. Policymakers often relied on mental shortcuts (heuristics) that, while efficient, could lead to systematic errors [14, 33]. The tendency to focus on readily available information or to simplify complex problems are examples of such heuristics at play. This aligns with the broader "behavioral revolution" in international relations, which emphasizes the psychological underpinnings of decisionmaking [14].

The Role of Strategic Culture and Organizational Dynamics: Rationality in security studies is not solely an individual cognitive process but also shaped by organizational structures and strategic culture [16, 17]. The U.S. military's emphasis on conventional warfare and its initial reluctance to fully grasp the nature of counterinsurgency contributed to strategic miscalculations, despite warnings from some within the intelligence community [4, 21]. The interagency dynamics and the struggle for influence between different departments also impacted how information was processed and decisions were made, often leading to suboptimal outcomes that cannot be fully explained by individual rational choice alone [16]. The concept of "effects-based operations," while intended to rationalize military action, often suffered from similar challenges in assessing outcomes [21, 35].

• Realism and Rationality Interplay: While realism often assumes rationality, the Vietnam experience

highlights the nuances of this relationship [1, 19]. States may act rationally within their perceived constraints and information, even if those perceptions are flawed. The pursuit of power and security, central to realist thought [13], might lead to choices that, in retrospect, appear irrational if viewed through a purely EUT lens, but are understandable when considering the subjective assessments and cognitive limitations of decision-makers [23, 30]. The "reasoning of state" is a complex interplay of various factors that extend beyond simple utility maximization [30].

The Vietnam War, therefore, demonstrates that "rationality" in security studies is not a singular, universally applied model, but rather a spectrum influenced by psychological, informational, and organizational factors. The persistence of strategic illusion [2], the difficulty in assessing effects-based operations [21, 35], and the challenges of predicting proliferation [25] all underscore the need for a richer conceptualization of rationality that moves beyond simplistic utility maximization.

DISCUSSION

The findings from the re-examination of the Vietnam War strongly suggest that a narrow adherence to expected utility theory as the sole definition of rationality in security studies is insufficient for explaining complex strategic decision-making. While EUT provides a valuable analytical framework, its deterministic and often overly simplistic assumptions about information, preferences, and cognitive processes fail to capture the pervasive influence of uncertainty, cognitive biases, and the dynamic nature of strategic environments.

The Vietnam War serves as a powerful testament to the limitations of assuming perfect rationality. Decision-makers, despite their intellect and access to vast intelligence resources, were repeatedly influenced by factors that diverge from pure EUT. The inability to precisely quantify probabilities, the shifting definitions of utility, and the evident impact of cognitive biases such as overconfidence, confirmation bias, and sunk cost fallacy, all illustrate that human decision-making in high-stakes security contexts is a far more intricate process than EUT alone can account for [7, 22]. The historical record indicates that choices were often made not solely on a cold calculation of expected value, but also on deeply held beliefs, personal convictions, and the psychological pressures of a protracted conflict [16, 22].

This calls for a shift towards a more expansive and theory-driven understanding of rationality in security studies. This enriched perspective acknowledges that:

• Subjective Probabilities are Central: As articulated by Ramsey [29] and De Finetti [5], individuals operate with subjective probabilities, which are shaped by their beliefs, experiences, and available information.

These subjective assessments, rather than objective probabilities, are the true drivers of decision-making under uncertainty [15]. Research on geopolitical forecasting underscores the value of improving these subjective probability assessments through rigorous training and feedback [3, 24, 34, 31]. The challenge for intelligence analysis lies in effectively communicating these probabilities, whether through words or numbers, to avoid misinterpretation [6].

• Cognitive Biases are Inescapable: Behavioral economics has demonstrated that cognitive biases are systematic and predictable deviations from rational judgment [14]. Incorporating these biases into our understanding of rationality allows for a more realistic assessment of how policymakers perceive risks, opportunities, and the likelihood of success or failure. This means moving beyond simply identifying "irrationality" and instead understanding the mechanisms through which these biases influence ostensibly rational actors [7]. The analytical confidence of officials, and its behavioral consequences, are critical considerations [10, 9].

• Uncertainty and Ambiguity are Endemic: Security environments are inherently uncertain and ambiguous [7, 17]. Policy-makers rarely possess complete or perfectly precise information [9]. Acknowledging this inherent imprecision, and understanding how decision-makers cope with it, is crucial for a more robust theory of rationality [7, 8]. The ability to assess uncertainty in international politics is a key challenge [7].

• Theory-Driven Reasoning complements EUT: Rather than discarding EUT, the goal should be to integrate it within a broader framework of theory-driven reasoning [14, 30]. EUT provides a powerful normative model of how decisions should be made, but a theorydriven approach helps explain how decisions are made, taking into account the psychological and informational realities of the decision-making environment. This involves understanding the underlying theories or mental models that decision-makers employ to interpret information and formulate strategies [33]. The interplay between realism and rational choice is a continuing area of scholarly debate [1, 19].

The implications of this enriched understanding of rationality are significant for both scholarship and policy. For scholars, it encourages a move beyond purely formal models to integrate insights from cognitive psychology, behavioral economics, and organizational theory into analyses of strategic behavior [14]. This can lead to more nuanced explanations of historical events and better predictions of future actions. For policymakers, it highlights the importance of structured analytic techniques to mitigate cognitive biases, improve probabilistic assessments, and foster a more adaptive and resilient decision-making process [10, 24, 34].

Emphasizing the value of precision in forecasting and understanding the behavioral consequences of probabilistic precision can lead to better outcomes [8, 9]. The lessons from attempts at "effects-based operations" reinforce the need for better assessment and metrics in complex environments [4, 21, 35].

The Vietnam War, in its tragic complexity, was not a simple case of irrationality. Instead, it was a profound illustration of human decision-making operating under immense pressure, with incomplete information, and influenced by a myriad of cognitive and organizational factors. By embracing a more comprehensive definition of rationality that moves beyond a simplistic expected utility framework, security studies can achieve a deeper and more accurate understanding of why states make the choices they do, and how those choices ultimately shape the course of international relations. The challenge lies in continuing to refine our theories of rationality to better reflect the realities of the strategic world.

CONCLUSION

The enduring question of rationality remains central to security studies, providing a fundamental lens through which to understand the choices made by states and other actors in the international system. This article has argued that while expected utility theory has offered a powerful and analytically tractable framework for conceptualizing rational behavior, its limitations become starkly apparent when confronting the complexities of real-world strategic decision-making, as exemplified by the Vietnam War.

The re-examination of the Vietnam War demonstrates that decision-making in high-stakes security contexts is rarely a perfectly calculated exercise in utility maximization. Instead, it is deeply influenced by the inherent uncertainty of information, the pervasive impact of cognitive biases, and the subjective nature of probabilistic assessments. Policymakers during the Vietnam War, despite their rational intentions, grappled with ill-defined probabilities, shifting utilities, and the distorting effects of overconfidence, confirmation bias, and the sunk cost fallacy [7, 9, 16, 22]. These factors, while not necessarily rendering decisions "irrational" in a common sense, certainly depart from the idealized assumptions of pure expected utility.

Therefore, this article advocates for an enriched and theory-driven understanding of rationality that moves beyond a strict adherence to expected utility theory. This more comprehensive approach integrates insights from behavioral economics and cognitive psychology, acknowledging that decision-makers operate with bounded rationality, rely on heuristics, and are influenced by subjective interpretations of probability [5, 14, 15, 29, 33]. This perspective does not discard the concept of rationality, but rather seeks to make it more empirically grounded and analytically robust, recognizing the human element at the heart of strategic choice.

By embracing this broader conceptualization of rationality, security studies can achieve several critical advancements. First, it enables a more nuanced and accurate explanation of historical events, moving beyond simplistic narratives of "mistakes" or "irrationality" to uncover the underlying cognitive and structural drivers of decisions [16, 23]. Second, it offers practical implications policy, encouraging the development for and implementation of systematic approaches to mitigate cognitive biases and improve the quality of intelligence assessments and strategic forecasts [3, 10, 24, 34]. Ultimately, by continually refining our understanding of what it means to be "rational" in the face of profound uncertainty and complexity, security studies can provide more insightful analyses and contribute to more effective policy in an ever-challenging international landscape.

REFERENCES

Achen, Christopher H. 2024. "Realism and Rationality."CriticalReviewReview36(4),https://doi.org/10.1080/08913811.2024.2440198.

Betts, Richard K. 2000. "Is Strategy an Illusion?" International Security 25(2): 5-50.

Chang, Welton, Eva Chen, Barbara A. Mellers, and Philip E. Tetlock. 2016. "Developing Expert Political Judgment." Judgment and Decision Making 11(5): 509-526.

Connable, Ben. 2012. Embracing the Fog of War: Assessment and Metrics in Counterinsurgency. Santa Monica, CA: Rand.

De Finetti, Bruno. 1931. "Probabilism," English translation in Erkenntnis 1989(31): 169-223.

Dhami, Mandeep K. and David R. Mandel. 2021. "Words or Numbers? Communicating Probability in Intelligence Analysis." American Psychologist 76(3): 549-560.

Friedman, Jeffrey A. 2019. War and Chance: Assessing Uncertainty in International Politics. New York: Oxford University Press.

Friedman, Jeffrey A., Joshua D. Baker, Barbara A. Mellers, and Richard Zeckhauser. 2018. "The Value of Precision in Geopolitical Forecasting." International Studies Quarterly 62(2): 410-422.

Friedman, Jeffrey A., Jennifer S. Lerner, and Richard Zeckhauser. 2018. "Behavioral Consequences of Probabilistic Precision." International Organization 71(4): 803-826.

Friedman, Jeffrey A. and Richard Zeckhauser. 2019. "Analytic Confidence and Political Decision-Making: Theoretical Principles and Experimental Evidence from National Security Officials." Political Psychology 39(5): 1069-1086.

Gelb, Leslie with Richard K. Betts. 1979. The Irony of Vietnam: The System Worked. Washington: Brookings Institution.

Gillies, Donald. 2000. Philosophical Theories of Probability. London: Routledge.

Glaser, Charles. 2010. Rational Theory of International Politics. Princeton: Princeton University Press.

Hafner-Burton, Emilie M., Stephan Haggard, David A. Lake, and David G. Victor. 2017. "The Behavioral Revolution and International Relations." International Organization 71(S): S1-S31.

Jeffrey, Richard. 1992. Probability and the Art of Judgment. Cambridge: Cambridge University Press.

Jervis, Robert. 1997. System Effects: Complexity in Political and Social Life. Princeton: Princeton University Press.

Katzenstein, Peter J. and Lucia A. Seybert. 2017. Protean Power: Exploring the Uncertain and Unexpected in World Politics. New York: Cambridge University Press.

Kent, Sherman. 1964. "Words of Estimative Probability." Studies in Intelligence 8(4): 49-65.

Kydd, Andrew H. 2024. "Realism and Rational Choice."CriticalReviewReview36(4),https://doi.org/10.1080/08913811.2025.2450140.

Mandel, David R. and Alan Barnes. 2014. "Accuracy of Forecasts in Strategic Intelligence." Proceedings of the National Academy of Sciences 111(30): 10984-10989.

Mattis, James N. 2008. "USJCOM Commander's Guidance for Effects-Based Operations." Parameters 38(3): 18-25.

McNamara, Robert S. with Brian VanDeMark. 1997. In Retrospect: The Tragedy and Lessons of Vietnam. New York: Times Books.

Mearsheimer, John J. and Sebastian Rosato. 2023. How States Think: The Rationality of Foreign Policy. New Haven: Yale University Press.

Mellers, Barbara A., Eric Stone, Terry Murray, Angela Minster, Nick Rohrbaugh, Michael Bishop, Eva Chen, Joshua Baker, Yuan Hou, Michael Horowitz, Lyle Unger, and Philip Tetlock. 2015. "Identifying and Cultivating Superforecasters as a Method of Improving Probabilistic Predictions." Perspectives on Psychological Science 10(3): 267-281.

Miller, Nicholas L. 2022. "Learning to Predict Proliferation." International Organization 76(2): 487-507.

National Intelligence Council. 2005. Estimative Products on Vietnam, 1948-1975. Washington, DC: U.S. Government Printing Office.

Pratt, John W., Howard Raiffa, and Robert Schlaiffer. 1995. Introduction to Statistical Decision Theory. Cambridge: The MIT Press.

Raiffa, Howard. 1968. Decision Analysis: Introductory Lectures on Choices Under Uncertainty. Reading, MA: Addison-Wesley.

Ramsey, Frank P. 1926. "Truth and Probability" reprinted in H. E. Kyburg and H. E. Smokler (eds.), Studies in Subjective Probability (New York: Wiley, 1964): 61-92.

Rathbun, Brian C. 2019. Reasoning of State: Realists, Romantics, and Rationality in International Relations. New York: Cambridge University Press.

Satopää, Ville A., Jonathan Baron, Dean P. Foster, Barbara A. Mellers, Philip E. Tetlock, and Lyle H. Ungar. 2014. "Combining Multiple Probability Predictions Using a Simple Logit Model." International Journal of Forecasting 30: 344-356.