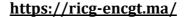


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ANCHORING BIAS: A LITERATURE REVIEW ON COGNITIVE MECHANISMS AND DECISION-MAKING IMPACT

LE BIAIS D'ANCRAGE : REVUE DE LITTERATURE SUR LES MECANISMES COGNITIFS ET LEUR IMPACT SUR LA PRISE DE DECISION

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ABSTRACT

Anchoring bias, a cognitive bias where initial information disproportionately influences subsequent judgments, plays a significant role in marketing decision-making processes. This literature review explores the cognitive mechanisms behind anchoring bias, its various forms, sources, and the strength of its influence, with a particular focus on marketing applications. By examining numerical and non-numerical anchoring, internal and external sources, and the underlying cognitive processes, the review provides a detailed understanding of how anchoring bias shapes consumer perceptions, pricing evaluations, and purchase decisions. This understanding can inform strategies to mitigate its effects, leading to better marketing practices and more rational consumer choices.

Keywords: anchoring bias; cognitive bias; decision-making; cognitive processes; behavioral economics.

RÉSUMÉ

Le biais d'ancrage, un biais cognitif où l'information initiale influence de manière disproportionnée les jugements ultérieurs, joue un rôle central dans les processus de prise de décision en marketing. Cette revue de littérature explore les mécanismes cognitifs sous-jacents au biais d'ancrage, ses différentes formes, sources et la force de son influence, en mettant l'accent sur ses applications dans le domaine du marketing. En examinant l'ancrage numérique et non numérique, les sources internes et externes, ainsi que les processus cognitifs impliqués, cette revue propose une compréhension approfondie de la manière dont le biais d'ancrage façonne la perception des prix, la valeur perçue et les décisions d'achat des consommateurs. Cette compréhension peut nourrir des stratégies visant à atténuer ses effets, favorisant ainsi des pratiques marketing plus efficaces et des choix de consommation plus éclairés.

Mots-clés: biais d'ancrage; biais cognitif; prise de décision; processus cognitifs; économie comportementale.

1. INTRODUCTION

Cognitive biases permeate our daily lives, subtly yet significantly shaping our decisions. The Nobel Prize-winning research of Daniel Kahneman and Amos Tversky shed light on the systematic and predictable ways these biases distort decision-making. Among them, anchoring bias is particularly intriguing. It occurs when undue weight is given to the first piece of information encountered—the "anchor." This anchor, whether a number, idea, or value, can skew judgment even if it is arbitrary or irrelevant. Despite its prevalence, several critical questions remain unanswered: What cognitive mechanisms drive anchoring bias? How do internal and external anchors differ in their influence? Under what conditions can this bias be mitigated?

Anchoring bias plays a crucial role in fields such as negotiation, finance, consumer behavior, and judicial decisions. In the field of marketing, it has been shown to influence several key variables, including perceived price fairness, brand value, and willingness to pay. For instance, an initially displayed high price can serve as a reference point, shaping consumers' price evaluations and purchase decisions. Product labels like "luxury" or "premium" can also act as non-numerical anchors that affect perceptions of quality and value. Understanding these mechanisms is essential for marketers aiming to design pricing and promotional strategies that influence consumer behavior ethically and effectively.

While anchoring bias has been extensively studied in psychology and behavioral economics, the literature on its implications in marketing remains fragmented. Previous research often isolates specific cases or contexts without offering a comprehensive synthesis of how anchoring operates within marketing decision-making. In particular, there is a lack of integrative work mapping the relationship between cognitive mechanisms and the marketing variables they affect.

This paper addresses that gap by conducting a structured literature review that bridges insights from cognitive psychology and marketing. It aims to clarify how anchoring bias affects consumer decision-making, and through which mechanisms it influences variables such as price perception, reference price, fairness judgment, and purchase intention. Therefore, the guiding research question of this review is as follows: How does anchoring bias influence decision-making in marketing, and through which cognitive and perceptual mechanisms does it shape consumer evaluations and behaviors?

The remainder of this paper is structured as follows: first, a comprehensive literature review separates numerical anchoring from non-numerical anchoring. Next, we explore the origins of anchoring, categorizing them as either internal or external. We then examine the varying strengths of anchoring effects across different studies. Subsequent sections address the interplay between anchoring sources, the influence of situational factors, and strategies for mitigating

anchoring effects. Finally, we offer practical recommendations, discuss ethical considerations, and outline the implications for future research and applications.

By posing and addressing these key research questions, this study aims to enhance theoretical understanding and provide practical insights that can be applied in professional and day-to-day decision-making scenarios.

2. LITERATURE REVIEW

Previous studies have extensively documented the influence of anchoring bias in various contexts such as legal judgments, consumer behavior, and negotiation (Tversky & Kahneman, 1974; Englich et al., 2006). These studies confirm the robustness of the anchoring effect across different domains, stimuli, and populations.

However, a synthesis of these findings reveals that while the cognitive mechanisms of anchoring are well explored, there is limited integrative analysis of how these mechanisms specifically operate within the marketing field, especially regarding the interaction between numerical and non-numerical anchors and key marketing decision variables.

This gap calls for a structured literature review that bridges cognitive psychology and marketing decision-making by mapping how anchoring bias influences variables such as price perception, purchase intention, and willingness to pay.

Therefore, this paper addresses the following research question: How does anchoring bias influence decision-making in marketing, and through which cognitive and perceptual mechanisms does it affect consumer evaluation and behavior?

Cognitive biases can be seen as mental shortcuts that our brain uses to process information quickly. These shortcuts, while efficient, can sometimes lead us astray. Anchoring bias, identified by Tversky and Kahneman (1974), exemplifies this idea. When we encounter an anchor, such as an initial price in a negotiation, it heavily influences our subsequent decisions, even if it is arbitrary or unrelated to the situation.

A theory explaining this effect is Kahneman and Tversky's prospect theory, which suggests that we use heuristics to simplify decision-making (Kahneman & Tversky, 1979). For example, when faced with a complex decision, we latch onto the first available piece of information to reduce our cognitive load. However, these heuristics can lead us to make insufficient adjustments and biased judgments (Epley & Gilovich, 2001).

Recent research has expanded our understanding of this bias, showing its impact in areas as diverse as consumer behavior, legal decisions, and financial forecasts. For instance, Ariely, Loewenstein, and Prelec (2003) demonstrated that anchors influence how consumers perceive prices and make purchasing decisions. In the legal domain, Englich, Mussweiler, and Strack (2006) found that judges can be influenced by initial sentencing recommendations, even if they are blatantly unrealistic.

In marketing, Ariely et al. (2003) demonstrated how initial price anchors shape perceived value and final purchasing decisions. Adaval and Monroe (2002) further showed that reference prices and brand positioning significantly influence consumers' price evaluations. These studies confirm that anchoring bias directly affects pricing perception, brand evaluation, and purchasing behavior — key variables in consumer decision-making. Adaval and Monroe (2002) highlighted the effect of reference prices on perceived price fairness and value assessment. Anchors also impact purchase intention, particularly when framed as discounts from an inflated original price. These findings indicate that anchoring affects not only final decisions but also the cognitive evaluation of product worth and fairness.

Recent research extends the discussion of anchoring bias to digital contexts. Turner and Schley (2022) investigate how anchoring manifests in e-commerce and social media platforms. They highlight that initial price displays or algorithmically suggested items significantly shape users' perceptions and decisions. Unlike traditional settings, these digital anchors are often personalized, enhancing their salience and impact. The study emphasizes the need for tailored mitigation strategies in online environments, such as presenting users with diverse initial anchors to counteract the bias. This demonstrates that while anchoring is a pervasive phenomenon, its mechanisms and strength can vary significantly depending on the medium in which it operates.

In delving deeper into the study of cognitive biases, it is crucial to recognize that anchoring is not merely a flaw in our thinking but a reflection of our brain's adaptive mechanisms. In a world where we are constantly bombarded with information, our mind uses anchors as a method to filter and simplify the continuous stream of data. This ability to simplify and structure information can often protect us against cognitive overload, but it can also expose us to systematic errors.

The study of anchoring bias also has profound implications for research in psychology and behavioral economics. The work of Tversky and Kahneman paved the way for a new understanding of human rationality, showing that our decisions are not always based on a logical and objective evaluation of facts. Instead, they are often the result of fast and intuitive mental processes.

Epley and Gilovich (2001) further explored these concepts by examining how adjustments from an anchor are often insufficient. Their research showed that even when individuals consciously try to correct their judgment by moving away from an initial anchor, these adjustments remain biased towards the anchor. This finding has important implications for training and decision-making, suggesting that merely being aware of anchoring biases is not enough to overcome them.

Other research has explored factors that can moderate the anchoring effect. For example, studies have shown that expertise in a particular field can reduce the impact of anchoring, although this is not always the case. Mussweiler and Strack (2000) examined how social comparisons can also play a role in anchoring, showing that exposure to information about other individuals can modulate our own anchored judgments.

3. COGNITIVE PROCESSES UNDERLYING ANCHORING BIAS

Anchoring bias often begins with the attention paid to the initial information. When we encounter an anchor, it captures our attention and shapes our perception, causing us to focus on it and ignore subsequent information (Wilson et al., 1996). This phenomenon can make the anchor particularly salient and influential. Attention is a finite cognitive resource, and once it is predominantly allocated to the anchor, other relevant information might be overshadowed or entirely disregarded. This selective attention can be particularly potent in situations where the initial information is striking or unexpected, further cementing the anchor's influence.

Memory also plays a crucial role. Anchors affect how we store and retrieve information, which can bias our memory recall (Chapman & Johnson, 1999). For example, when we try to recall information, the initial anchor serves as a reference point, influencing how we interpret and remember other information. This bias in memory can lead to a reinforcement loop where the anchor becomes increasingly embedded in our cognitive framework, making it more challenging to adjust our judgments even when faced with new information.

Anchoring is often a form of heuristic processing, where we use simple rules to make complex decisions. While these heuristics can reduce our cognitive load, they often lead to systematic errors (Kahneman, 2011). Adjustments from the anchor are typically insufficient, leading to biased judgments (Epley & Gilovich, 2001). The heuristic nature of anchoring means that we rely on the anchor as a shortcut, often failing to fully incorporate additional information or reevaluate the anchor's relevance as the decision-making process unfolds.

Neuroscience studies have also explored the brain mechanisms behind anchoring bias. The prefrontal cortex, a brain region involved in cognitive control and decision-making, plays a key role in processing anchors (Bhanji & Delgado, 2014). Functional magnetic resonance imaging (fMRI) studies have shown that anchors activate brain regions involved in evaluation and comparison, highlighting the complex neural processes underlying anchoring effects (Krawczyk, 2002). These neural activations suggest that anchoring involves not just simple cognitive heuristics but also intricate neural pathways that evaluate and integrate information, often biased by the initial anchor.

Moreover, individual differences in cognitive capacity and personality traits can influence how strongly one is affected by anchoring. Research indicates that individuals with higher cognitive reflection, who are more likely to engage in deliberate and analytical thinking, may be less susceptible to anchoring effects (Frederick, 2005). Conversely, those with a tendency towards impulsivity or low need for cognition may rely more heavily on anchors, highlighting the interplay between cognitive processing styles and susceptibility to biases.

Further insights into the cognitive mechanisms of anchoring bias come from neuroscience and applied psychology. Studies using functional MRI (fMRI) have highlighted the role of the prefrontal cortex, which is heavily involved in valuation and comparison processes triggered by anchors. These neural activations explain why anchoring is such a persistent and subconscious bias. Psychological research also shows that cognitive load and emotional states play critical roles; for instance, individuals under stress are more prone to anchoring due to reduced cognitive control. Promising interventions include neurofeedback training, which enhances prefrontal activity, and mindfulness exercises, which promote deliberate, reflective decision-making. These interdisciplinary findings open new avenues for mitigating anchoring bias at its cognitive roots.

3. TYPES OF ANCHORING

Numerical Anchoring is the most common form of anchoring, where a specific number serves as an anchor. For instance, an initial price in a negotiation can heavily influence the final agreed-upon amount, even if the initial number is arbitrary or unfounded.

Numerical anchors are particularly powerful because they provide a clear, concrete reference point, simplifying the decision-making process (Tversky & Kahneman, 1974). Numerical anchoring can be seen in various settings, from pricing strategies in marketing to estimations in project management, where initial figures heavily influence subsequent evaluations and adjustments.

Non-numerical Anchoring involves using qualitative information as an anchor. This can include descriptions, images, or comparisons. For instance, describing a product as "high-end" before revealing its price can anchor perceptions of value (Mussweiler & Strack, 2000). Non-numerical anchors influence judgments by providing a conceptual framework that shapes subsequent evaluations. In advertising, for example, framing a product as luxurious or exclusive can set an expectation that affects consumer perceptions and willingness to pay. Similarly, in social contexts, initial impressions based on qualitative information, such as someone's attire or demeanor, can anchor subsequent judgments about their character or capabilities.

Non-numerical anchors are often subtle yet pervasive, influencing our judgments in ways that are not immediately apparent. For example, in legal contexts, the way a case is initially presented can anchor jurors' perceptions of guilt or innocence, affecting their interpretation of evidence and testimonies. Understanding the different types of anchoring is crucial for developing strategies to mitigate their effects, particularly in fields where decisions have significant consequences.

A specific example of non-numerical anchoring is the study by Mussweiler and Strack (2000), which found that participants who were primed with traits related to either success or failure before evaluating job candidates subsequently rated the candidates more favorably or unfavorably, respectively. This study highlights how non-numerical anchors, such as descriptive labels or initial impressions, can significantly shape subsequent evaluations.

4. SOURCES OF ANCHORING

Internal Anchoring comes from an individual's prior knowledge, experiences, or beliefs. For example, a salesperson might base their price expectations on previous sales of similar products (Wegener et al., 2001). Internal anchors are influenced by personal history and cognitive schemas, making them deeply entrenched and resistant to change. These internal anchors can shape expectations and judgments in ways that are often subconscious, leading to persistent biases in decision-making processes.

External Anchoring is introduced by another party or an external source. In negotiations, a high initial offer from a buyer can serve as an external anchor, influencing the seller's counteroffer (Galinsky & Mussweiler, 2001). External anchors can be strategically used to influence decisions, leveraging the power of initial information to shape outcomes. For instance, in marketing, the initial price displayed for a product can serve as an anchor, affecting consumers' willingness to pay.

External anchors are particularly powerful in social and professional interactions where the initial information is provided by an authoritative or credible source. For example, expert opinions, initial media reports, or first impressions in job interviews can serve as external anchors, shaping subsequent evaluations and decisions. Recognizing the impact of external anchors is essential for developing techniques to counteract their influence, such as seeking additional perspectives or delaying judgment until more information is available.

A study by Northcraft and Neale (1987) illustrated the power of external anchors in real estate. Real estate agents were provided with different listing prices for a property and were asked to estimate its value. Despite their expertise, the agents' valuations were heavily influenced by the arbitrary listing prices, demonstrating the potent effect of external anchors in professional judgments.

The interaction between internal and external sources of anchoring is a complex and dynamic process. Internal anchors, rooted in personal beliefs and prior experiences, can be significantly influenced by external factors such as societal norms, media representations, and interpersonal communications. For instance, a person's internal belief about the safety of a new technology can be swayed by expert opinions presented in the media, thereby creating a new external anchor that modifies the internal anchor. This interaction underscores the importance of understanding the fluid nature of anchoring sources and suggests that interventions aimed at mitigating bias need to address both internal predispositions and external influences.

5. STRENGTH OF ANCHORING

The strength of anchoring effects varies based on several factors, including the relevance and extremity of the anchor, the decision context, and differences in susceptibility to the bias (Furnham & Boo, 2011). Research has shown that more extreme anchors tend to have stronger effects, as do anchors perceived as highly relevant or credible (Mussweiler & Strack, 1999). Additionally, individual differences such as cognitive style, expertise, and motivation can influence the degree to which anchors impact judgments (Jacowitz & Kahneman, 1995).

The relevance of the anchor is crucial in determining its strength. Anchors that are closely related to the decision context or come from a trusted source are more likely to be influential.

The extremity of the anchor also plays a significant role. Extreme anchors, whether high or low, can create a broader range of possible adjustments, making them more impactful. However, extremely unrealistic anchors can sometimes be dismissed if they are perceived as implausible. Understanding the factors that influence the strength of anchoring can help in designing interventions to mitigate its effects. For example, encouraging individuals to generate multiple alternative estimates or perspectives can help reduce the reliance on a single anchor.

Individual differences further modulate the impact of anchors. People with a high need for cognition, who enjoy engaging in complex thought processes, may be less susceptible to anchoring effects as they are more likely to critically evaluate the anchor and seek additional information (Cacioppo & Petty, 1982). Conversely, those with lower cognitive engagement may rely more heavily on the anchor as a heuristic, leading to stronger anchoring effects. Expertise in a specific domain can also reduce susceptibility to anchoring, as experts are better equipped to evaluate the relevance and accuracy of the anchor based on their extensive knowledge and experience.

The practical implications of anchoring bias are evident in fields like finance and healthcare, where initial information often disproportionately shapes decisions. For example, in finance, initial stock price targets frequently serve as anchors,

swaying investor behavior even when market conditions suggest alternative valuations. Similarly, in healthcare, early diagnostic impressions can anchor subsequent treatment decisions, despite conflicting evidence from later tests. Simulation-based training programs have been used effectively in both fields to mitigate these biases. Medical simulations, for instance, expose practitioners to varying scenarios that help them recognize and adjust for anchoring effects, while trading simulations in finance test decision-making under differing anchor conditions. These approaches not only improve practical decision-making but also provide empirical data on how anchoring can be mitigated across diverse contexts.

A notable study by Jacowitz and Kahneman (1995) investigated the impact of anchoring on estimates of numerical quantities. Participants were asked to provide estimates for various quantities after being exposed to high or low anchors. The results showed significant differences in estimates based on the anchors, underscoring the strength of anchoring effects even when individuals were aware that the anchors were arbitrary.

Situational factors such as stress or time pressure can also markedly influence the strength of anchoring effects. Research indicates that under high-stress conditions or when individuals are under significant time constraints, the reliance on anchors increases as cognitive resources are strained. For example, a study by Epley and Gilovich (2006) found that individuals under time pressure were more likely to rely on initial anchors when making decisions, as they had less capacity to adjust away from these anchors. This suggests that in high-pressure environments, such as emergency decision-making or fast-paced negotiations, anchoring effects may be more pronounced, potentially leading to less optimal outcomes.

To weaken the strength of anchoring effects, several strategies can be employed, including critical thinking exercises and training programs. Critical thinking exercises encourage individuals to question and scrutinize initial information, promoting a more analytical approach to decision-making. Training programs designed to enhance awareness of cognitive biases and improve decision-making processes can also be effective. For instance, programs that simulate real-world scenarios and provide feedback on decision-making can help individuals recognize and adjust for anchoring effects. These strategies not only help in reducing the influence of anchors but also foster a mindset of continuous evaluation and adjustment, which is crucial for mitigating cognitive biases in various settings.

6. DISCUSSION

The review of the literature on anchoring bias demonstrates its pervasive influence on decision-making across various contexts. Anchoring effects are robust, affecting both numerical and non-numerical judgments. The cognitive processes underlying anchoring, including attention, memory, and heuristic processing, highlight the complexity of this bias and its deeply rooted nature in human cognition.

Anchoring bias has significant implications for decision-making in numerous fields. In negotiations, understanding the power of initial offers can inform strategies to mitigate the bias and achieve fairer outcomes (Galinsky & Mussweiler, 2001). For example, training negotiators to delay their responses and consider multiple perspectives can help counteract the initial anchor's influence. Research by Kristensen and Gärling (1997) showed that negotiators who were aware of anchoring bias and its effects could more effectively resist the influence of high or low initial offers, leading to more equitable agreements.

In consumer behavior, awareness of price anchoring can help consumers make more informed choices (Ariely et al., 2003). Retailers often use high initial prices as anchors to make subsequent discounts appear more attractive. A study by Adaval and Monroe (2002) demonstrated that consumers exposed to a high anchor price were more likely to perceive a subsequent discount as a good deal, even if the final price was not objectively low. Educating consumers about these tactics can enhance their decision-making by encouraging them to compare prices across different contexts and retailers.

In legal and financial contexts, recognizing anchoring effects can lead to more accurate and less biased judgments (Englich et al., 2006). Judges and financial analysts, for example, can be trained to identify and adjust for anchoring influences. A study by Northcraft and Neale (1987) illustrated how real estate agents' valuations were significantly influenced by arbitrary listing prices, underscoring the importance of mitigating anchoring bias in professional judgments.

For marketing practitioners, acknowledging and managing anchoring effects is crucial in shaping pricing strategies, promotional campaigns, and product positioning. Providing reference prices, using strategic wording, and understanding how consumers form value judgments can improve campaign effectiveness. Ethical considerations should guide how anchors are used to avoid manipulating consumer perceptions unfairly.

This review has several limitations. The literature on anchoring bias is vast, and while this paper provides a comprehensive overview, it cannot cover all aspects in detail. Additionally, most studies on anchoring are conducted in controlled environments, which may not fully capture the complexity of real-world decision-making. Future research should explore anchoring bias in more diverse and ecologically valid contexts. For instance, examining how anchoring effects play out in dynamic, real-time decision-making environments such as stock trading or crisis management could provide valuable insights.

Future research should also investigate strategies to mitigate anchoring bias, such as training programs to enhance cognitive control or interventions to increase awareness of biases (Wilson et al., 1996). Exploring the neural mechanisms underlying anchoring can also provide deeper insights into its cognitive basis (Bhanji & Delgado, 2014). For example, studies utilizing neuroimaging techniques could identify specific brain regions activated during anchoring tasks, offering clues about how to disrupt these neural processes and reduce bias.

Furthermore, research should examine the impact of cultural and contextual factors on anchoring effects, as they may influence the strength and nature of the bias (Furnham & Boo, 2011). Cross-cultural studies, such as those comparing decision-making processes in individualistic versus collectivistic cultures, could reveal how cultural norms and values shape susceptibility to anchoring. Additionally, understanding how situational factors like stress or time pressure affect anchoring can inform the development of targeted interventions.

Practitioners in fields such as marketing, finance, and negotiations can benefit from specific recommendations to mitigate anchoring effects. These include developing structured decision-making processes, implementing precommitment strategies to counteract initial biases, and fostering a culture of critical evaluation. Additionally, ethical considerations must be taken into account when using anchoring in practice. For example, marketers should be mindful of not exploiting anchoring biases to manipulate consumer choices unethically. Similarly, negotiators should strive to create fair agreements without unduly influencing the other party's decision-making through anchoring tactics. Ensuring transparency and fairness can help maintain ethical standards while leveraging the understanding of anchoring effects.

7. CONCLUSION

This literature review has explored the cognitive foundations and manifestations of anchoring bias, with a particular emphasis on its implications in marketing decision-making. Through the analysis of its underlying mechanisms, forms, sources, and effects, the review offers a structured perspective on how anchoring can influence perceptions, judgments, and behaviors, particularly in consumer contexts. While the topic has been extensively addressed in psychological and behavioral economics literature, its integration into marketing-specific frameworks remains relatively fragmented, which this review has sought to begin addressing.

Anchoring bias, as discussed, is not merely a flaw in human reasoning but a reflection of how the mind simplifies complex decision-making through heuristics. Processes such as attention, memory recall, and cognitive load management contribute to how individuals process and respond to anchor information. These cognitive mechanisms

interact with situational variables—such as time pressure, emotional states, or information complexity—and individual traits like expertise or cognitive reflection, which can either exacerbate or mitigate the effects of anchoring.

Within marketing, anchoring influences a wide range of decision variables including price perception, willingness to pay, perceived value, and purchase intention. Several studies illustrate how initial prices, product labels, or reference points shape consumer evaluations, often without conscious awareness. This raises important ethical considerations in the design of pricing strategies and promotional communications, emphasizing the need for responsible application of behavioral insights in practice.

While this review does not propose a visual conceptual model, it offers a synthesis of theoretical and empirical insights that may serve as a foundation for future empirical testing. Researchers may build upon the identified relationships to develop testable models that examine how specific types of anchors interact with cognitive mechanisms and marketing outcomes. Doing so could contribute to a more nuanced understanding of how anchoring bias functions across diverse consumption contexts and consumer segments.

It is important to acknowledge the limitations of this work. As a narrative review, the paper is necessarily selective and cannot claim to capture the entirety of the anchoring literature. Moreover, many of the studies discussed were conducted under experimental conditions that do not fully replicate the complexity and dynamism of real-world decision-making. Future research could benefit from designs that incorporate more ecological validity, such as field experiments or longitudinal studies.

Additional research is also warranted to investigate the effectiveness of mitigation strategies. While cognitive training, critical thinking exercises, and decision aids have shown promise, their long-term impact and applicability across domains remain uncertain. Likewise, the potential of neurofeedback and other neuroscientific approaches to reduce cognitive biases is intriguing, but still underexplored in practical settings.

Finally, anchoring bias should be examined in light of cultural and contextual diversity. Cultural norms and values may shape how individuals interpret and respond to anchors, influencing the generalizability of existing findings. Crosscultural comparisons, digital environments, and high-stakes decision contexts such as healthcare or public policy represent fertile ground for future inquiry.

By further investigating these areas, researchers and practitioners alike can contribute to developing more refined, context-sensitive approaches to understanding and mitigating anchoring bias. Although much work remains to be done, a deeper grasp of this pervasive cognitive bias holds the potential to enhance both theoretical knowledge and real-world decision-making quality.

REFERENCES

Ariely, D., Loewenstein, G., & Prelec, D. (2003). "Coherent Arbitrariness": Stable Demand Curves without Stable Preferences. Quarterly Journal of Economics, 118(1), 73-106.

Bhanji, J. P., & Delgado, M. R. (2014). Perceived Control Influences Neural Responses to Setbacks and Promotes Persistence. Neuron, 83(6), 1369-1375.

Chapman, G. B., & Johnson, E. J. (1999). Anchoring, Activation, and the Construction of Values. Organizational Behavior and Human Decision Processes, 79(2), 115-153.

Epley, N., & Gilovich, T. (2001). Putting Adjustment Back in the Anchoring and Adjustment Heuristic: Differential Processing of Self-Generated and Experimenter-Provided Anchors. Psychological Science, 12(5), 391-396.

Epley, N., & Gilovich, T. (2006). The Anchoring-and-Adjustment Heuristic: Why the Adjustments are Insufficient. Psychological Science, 17(4), 311-318.

Englich, B., Mussweiler, T., & Strack, F. (2006). Playing Dice with Criminal Sentences: The Influence of Irrelevant Anchors on Experts' Judicial Decision Making. Personality and Social Psychology Bulletin, 32(2), 188-200.

Frederick, S. (2005). Cognitive reflection and decision making. Journal of Economic Perspectives, 19(4), 25–42.

Frederick, S., & Mochon, D. (2012). A Scale Distortion Theory of Anchoring. Journal of Experimental Psychology: General, 141(1), 124-133.

Furnham, A., & Boo, H. C. (2011). A Literature Review of the Anchoring Effect. Journal of Socio-Economics, 40(1), 35-42.

Galinsky, A. D., & Mussweiler, T. (2001). First Offers as Anchors: The Role of Perspective-Taking and Negotiator Focus. Journal of Personality and Social Psychology, 81(4), 657-669.

Gruzelier, J. H. (2014). EEG-neurofeedback for optimising performance. III: A review of methodological and theoretical considerations. Neuroscience & Biobehavioral Reviews, 44, 159–182.

Jacowitz, K. E., & Kahneman, D. (1995). Measures of Anchoring in Estimation Tasks. Personality and Social Psychology Bulletin, 21(11), 1161-1166.

Kahneman, D. (2011). Thinking, Fast and Slow. Farrar, Straus and Giroux.

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. Econometrica, 47(2), 263-291.

Krawczyk, D. C. (2002). Contributions of the Prefrontal Cortex to the Neural Basis of Human Decision Making. Neuroscience and Biobehavioral Reviews, 26(6), 631-664.

Mussweiler, T., & Strack, F. (1999). Hypothesis-Consistent Testing and Semantic Priming in the Anchoring Paradigm: A Selective Accessibility Model. Journal of Experimental Social Psychology, 35(2), 136-164.

Mussweiler, T., & Strack, F. (2000). Numeric Judgments under Uncertainty: The Role of Knowledge in Anchoring. Journal of Experimental Social Psychology, 36(5), 495-518.

Northcraft, G. B., & Neale, M. A. (1987). Experts, Amateurs, and Real Estate: An Anchoring-and-Adjustment Perspective on Property Pricing Decisions. Organizational Behavior and Human Decision Processes, 39(1), 84-97.

Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. Journal of Personality and Social Psychology, 42(1), 116–131.

Soll, J. B., Milkman, K. L., & Payne, J. W. (2016). A user's guide to debiasing. In G. Keren & G. Wu (Eds.), The Wiley Blackwell Handbook of Judgment and Decision Making (Vol. 2, pp. 924–951). Wiley.

Turner, C., & Schley, D. R. (2022). The evolving influence of anchoring bias in digital environments: Implications for decision-making in e-commerce and social media. Journal of Behavioral Decision Making, 35(1), 45-60.

Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. Science, 185(4157), 1124-1131.

Wegener, D. T., Petty, R. E., Blankenship, K. L., & Detweiler-Bedell, B. T. (2001). Elaboration and Numerical Anchoring: Implications of Attitude Theories for Consumer Judgment and Decision Making. Journal of Consumer Psychology, 11(1), 3-16.

Wilson, T. D., Houston, C. E., Etling, K. M., & Brekke, N. (1996). A New Look at Anchoring Effects: Basic Anchoring and Its Antecedents. Journal of Experimental Psychology: General, 125(4), 387-402.

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