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**Marketing automation and decision making: The role of heuristics and AI in marketing**

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## **Abstract**

**Purpose:** This review examines Simone Guercini's book "*Marketing Automation and Decision Making: The Role of Heuristics and AI in Marketing*", providing a synthetic but highly informative review of its insights into the relationship between artificial intelligence and heuristic decision-making in marketing strategies.

**Design/methodology/approach:** The review analyzes key concepts from the book, particularly the role of AI in marketing automation and the enduring relevance of marketers' heuristics. It summarizes and critiques the main arguments presented, focusing on how the author illustrates the benefits of AI in enhancing marketing efficiency while emphasizing the importance of heuristics for intuitive decision-making. By highlighting these key themes, the review underscores the balance between technological advancements and human insights, providing a comprehensive overview of how both elements contribute to effective marketing strategies in today's digital landscape.

**Findings:** By highlighting these key themes presented in the book this review endorse Guercini's solid framework that emphasizes the necessity of balancing AI-driven precision and human intuition. Indeed, while AI tools are essential for managing the massive amount of data and information characterizing the complexities of contemporary marketing, heuristics remain crucial as they ensure marketers' ability to make quick, intuitive decisions that leverage their experience and understanding of consumer behavior, especially in situations where data may be incomplete or ambiguous.

**Originality/value:** This review aims to contribute to the way opened by Guercini's book in promoting the discourse about shedding light on the pros and cons of AI and how it can be successfully implemented to improve decision-making in business settings. Furthermore, this review summarizes the practical implications disclosed by the book, confirming the need for marketing professionals to adapt to a rapidly evolving business landscape by embracing

AI-powered solutions while maintaining crucial human insights that foster creativity, empathy, and strategic thinking in their approaches.

**Keywords:** Marketing, heuristics, artificial intelligence, decision-making

**Paper type:** Book Review

### **Marketing automation and decision making: The role of heuristics and AI in marketing**

The pervasive use of artificial intelligence (AI) is revolutionizing all aspects of business, echoing past transformative periods in management history, such as the shift from the industrial revolution to the knowledge economy. Much like the rise of assembly lines in the early 20th century that redefined production and efficiency, AI is now reshaping marketing – one of the most affected areas – due to its reliance on vast amounts of customer data (Guercini, 2020; 2022). As Henry Ford’s assembly line allowed for unprecedented scale and speed, AI’s ability to analyze massive datasets and provide real-time insights enables marketers to optimize campaigns, refine customer segmentation, enhance predictive analytics, and personalize communication (Davenport *et al.*, 2020; Huang and Rust, 2021; Magni *et al.*, 2024). This mirrors earlier management revolutions, where new technologies and methods transformed traditional practices, allowing for more precision and agility in decision-making (Jain *et al.*, 2024; Scuotto *et al.*, 2024).

However, while AI-backed tools are revolutionizing marketing with innovative solutions, it is crucial to remember that decision-making should – and ideally will – remain with humans whose cognitive limitations often lead them to make suboptimal choices (Simon, 1957). In this context, marketers frequently turn to heuristics (i.e., mental shortcuts based on experience that often provide efficient ways to find answers, but they do not guarantee a correct outcome; Gigerenzer and Gaissmaier, 2011) to simplify complex decision-making processes, especially in today’s dynamic and uncertain business landscape

(Guercini and Freeman, 2023). Indeed, although heuristics may lack the computational power of AI algorithms, they provide speed, flexibility, and essential human insight. Hence, it is clear that humans and machines must work together, with AI handling more analytical tasks while human skills like intuition and empathy become more valuable, ultimately requiring human judgment to guide AI's application and enhance its effectiveness (Campbell *et al.*, 2020).

Simone Guercini's *Marketing Automation and Decision Making: The Role of Heuristics and AI in Marketing* addresses the complex challenges marketers face in balancing AI's data-driven precision with the irreplaceable value of human intuition (Eriksson *et al.*, 2020; Huang and Rust, 2022). By bridging the gap between algorithmic decision-making and human judgment, Guercini crafts a comprehensive framework that not only emphasizes the transformative potential of AI but also reaffirms the importance of marketers in guiding strategic choices. Rather than viewing AI as a replacement for human insight, the book positions it as a powerful complement – an evolution in marketing tools that enhances, rather than diminishes, the role of the marketer. This approach underscores the continued relevance of human intuition in areas where creativity, empathy, and contextual understanding are essential, ensuring that marketers remain indispensable as technology advances.

To explore this interplay, Guercini opens the book by outlining key themes such as the rise of marketing automation, the integration of AI into decision-making, and the role of heuristics. Central to the book's thesis is the argument that heuristics remain vital, especially as marketers integrate new technological tools. Guercini, drawing on the work of Gigerenzer (2022), emphasizes that a greater awareness and legitimacy of heuristics are essential in this new context. Consequently, AI should be seen as a tool that enhances intuitive decision-making, essential for effective marketing strategies, by complementing heuristic thinking and bolstering human intuition rather than replacing it. This sets the tone for the

book's broader exploration of how marketers can effectively blend AI with human insight in their decision-making.

Building on this, Guercini, in Chapter 2, explores the theoretical basis of heuristics, highlighting their efficiency in reaching conclusions compared to traditional, slower, systematic approaches (Gigerenzer and Brighton, 2009). By legitimizing heuristics, Guercini challenges the notion that marketing should rely solely on analytical methods, emphasizing the continued relevance of intuitive decision-making in an automated age. Precisely, he references the "fast and frugal heuristics" approach (Gigerenzer and Todd, 2012), suggesting that AI can empower marketers to leverage data insights while still relying on their instincts and experiences. Guercini also addresses the practical implications of applying heuristics in marketing, using dual-system theory (Kahneman, 2011) to illustrate how marketers balance heuristic and systematic processing. By understanding consumer heuristics, they can tailor messages and offers to align with natural decision-making patterns. For instance, leveraging availability heuristic or anchoring effect enables marketers to design effective campaigns that engage target audiences.

Linked to this, in Chapter 3, Guercini analyzes the role of heuristics in consumer decision-making highlighting how these cognitive strategies help consumers navigate complex choices. Also in this context, the author stems from the dual-system theory (Kahneman, 2011) to illustrate that consumers often rely on heuristics when they lack the time or cognitive resources to process information thoroughly. In this regard, Guercini argues that heuristics (e.g., brand name heuristic and the "more is better" heuristic; Gunasti and Ross, 2010; Homer and Mukherjee, 2018) become particularly important, serving as effective decision-making aids for consumers faced with overwhelming options in a digitally-driven market. This reliance on heuristics is especially pronounced among different consumer types. For instance, hedonistic consumers tend to focus on sensory and emotional cues, while

utilitarian consumers engage in more analytical processing (Garner, 2022). Consequently, Guercini emphasizes the significance of recognizing these distinctions, allowing marketers to customize their strategies to align with the heuristics that shape consumer choices. He further highlights that understanding consumer heuristics is crucial not just for effective marketing strategies but also for ethical considerations. Indeed, while leveraging heuristics can positively influence consumer decisions, there is a risk of manipulation if marketers exploit these mental shortcuts without transparency (Johnson *et al.*, 2012).

In Chapter 4, Guercini turns the lens back onto marketers, providing a practical framework – an *adaptive toolbox* – of heuristics that marketers can use to navigate the complexity of modern marketing environments. This dynamic toolbox allows marketers to select and adapt heuristics<sup>1</sup> based on varying circumstances and strategic goals. Context plays a crucial role, as marketers must consider consumer behavior, competitive dynamics, and technological advancements, since the effectiveness of heuristics varies across different situations. Guercini highlights the toolbox's practical implications in new product development and innovation screening, where marketers can efficiently evaluate user-generated ideas by filtering them based on complexity and community feedback, thereby alleviating cognitive overload and streamlining decision-making. He also stresses the need for continuous evaluation and refinement of heuristic strategies, urging marketers to regularly adapt their frameworks to remain responsive to changing market conditions. This iterative process ensures that the toolbox remains relevant and effective, enabling proactive adaptation to change – in line with other approaches to decision-making in business settings (e.g., Cristofaro *et al.*, 2025).

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<sup>1</sup> Drawing on research by Hutchinson *et al.* (2010), Guercini discusses three specific types of heuristics that marketers use in decision-making. *Difference-based heuristics* involve comparing specific attributes or outcomes of options, enabling marketers to make quicker decisions based on observable characteristics. *Trend-based heuristics* focus on identifying patterns in data over time, helping marketers anticipate market behavior and consumer preferences to guide timely actions. *Exemplar-based heuristics* draw on past successful products or campaigns as models for new initiatives, allowing marketers to leverage historical success for informed decision-making.

Interestingly, in Chapter 5, Guercini takes a historical approach to examine the evolution of marketing automation and artificial intelligence, detailing their impact on marketing practices. He traces the evolution from simple rule-based systems (e.g., email campaigns and customer segmentation) to AI-backed solutions, which enable dynamic, personalized marketing strategies and real-time campaign optimization (Wood, 2015). However, while machines excel at processing complex data to enhance customer profiling, targeting, and engagement as they can learn and improve through continuous data analysis (Bucklin *et al.*, 2002; Hirt and Willmott, 2014), Guercini underscores the indispensable role of human decision-makers, particularly in scenarios where data may be incomplete or ambiguous. Indeed, marketers' oversight is not merely beneficial but essential for the monitoring of outcomes and the execution of strategic interventions (Guercini, 2020). Consequently, Guercini emphasizes that while artificial intelligence is substantially transforming marketing decision-making processes, human judgment may evolve, yet it will remain fundamentally essential. Based on this, he emphasizes that the advent of automation will not eliminate the necessity for heuristics; rather, it will create new opportunities for their application, predicting a future of greater integration between AI and human decision-making (see Figure 5.3 on page 107 of the book).

Stemming from this, in the following chapter, Guercini emphasizes AI's transformative role in marketing decision-making by enabling faster, more accurate insights into consumer behavior through machine learning algorithms that analyze large datasets, predict trends, and optimize strategies. Notably, AI's real-time data processing helps marketers swiftly adapt to changing behaviors, particularly in programmatic advertising and data-driven customer segmentation (Puntoni *et al.*, 2021). However, while examining the effectiveness of both supervised and unsupervised learning models in enhancing decision-making speed and accuracy, he also cautions against over-reliance on AI due to risks

like overfitting, where models become overly specialized to past data. To address this concern, Guercini draws on Gigerenzer and Todd (1999) to advocate for a balanced approach that complements AI's complex models with simpler heuristics, ensuring greater speed and transparency. Furthermore, he discusses how AI revolutionizes customer classification by automating segmentation based on behavioral data, which leads to personalized recommendations that boost satisfaction and drive sales. In this context, he highlights the crucial role of AI-powered recommendation systems in enhancing user experience on platforms like Amazon and Netflix through collaborative and content-based filtering, while also highlighting the need for continuous updates to ensure recommendations remain relevant to evolving consumer preferences (Giardino, 2024). Despite ethical concerns about privacy and bias, Guercini concludes that AI-driven programmatic advertising is invaluable for marketers, offering unmatched precision and efficiency in ad placement to effectively reach target audiences with tailored messaging, thereby fundamentally changing how brands engage with consumers in a complex, data-driven landscape.

In Chapter 7, Guercini bridges theory and practice by presenting case studies and real-world examples of how marketers are navigating the integration of AI and heuristics in their daily tasks. Precisely, he draws on qualitative research conducted through interviews with entrepreneurs and managers, examining their experiences and perspectives on marketing automation. These interviews reveal a duality in sentiment: while there is considerable optimism regarding the potential of AI to enhance marketing processes – particularly in areas like customer profiling and recommendation systems – marketers also express concerns about challenges such as data quality and control (Guercini, 2019). This contrast sets the stage for a deeper examination of how these sentiments shape the application of heuristics in marketing. Indeed, it becomes clear that despite the positive outlook on AI's future impact, significant issues persist, particularly regarding the necessity for robust relational networks among

stakeholders to ensure effective data management. Marketers emphasize that AI systems cannot operate independently and require human oversight for optimal functioning. This underscores the importance of integrating human intuition and experience into automated processes, highlighting the role of heuristics as cognitive shortcuts that facilitate rapid decision-making, especially under conditions of uncertainty. To further illustrate this point, the author identifies three principal heuristic rules that marketers frequently employ: *multiplier heuristics*, *threshold heuristics*, and *calends heuristics*. Multiplier heuristics involve using a coefficient to forecast outcomes, such as applying a mark-up to purchase costs for pricing strategies, enabling quick estimations essential for planning (Katsikopoulos *et al.*, 2020). Transitioning from multipliers, the discussion moves to threshold heuristics, which focus on establishing predetermined limits for actions or judgments, as exemplified by a textile company that restricts exports to certain markets to a percentage of total sales, thereby managing risk and illustrating how clear guidelines can support effective marketing strategies (Guercini and Runfola, 2021). Finally, the author examines calends heuristics, which use specific dates to inform decisions, such as tracking commodity prices based on historical data from particular days, highlighting the role of timing in purchasing decisions and the adaptability of heuristics in marketing (Guercini, 2022). Thus, Chapter 7 is used by Guercini to bring the book's ideas to life by demonstrating that heuristics are vital tools for marketers in today's complex business environment, at the same time highlighting the necessity of integrating them with AI-driven marketing automation to improve decision-making and effectively address contemporary challenges.

In the concluding chapter, Guercini synthesizes the book's central arguments, focusing on the future of marketing automation and decision-making. He reiterates that the rise of marketing automation, especially through advanced AI tools, necessitates a renewed focus on heuristics in marketing decisions (Simon and Newell, 1965; Kahneman, 2011).

While recognizing the benefits of automation, he warns that reliance on data-driven decisions may diminish the role of human marketers (Davenport *et al.*, 2020), highlighting the need for their active engagement. The chapter addresses the limitations of automated systems, which, despite their advantages, can lead to errors and unintended consequences, raising concerns about transparency and control. In this context, heuristics act as a counterbalance, simplifying complex decision-making processes (Gigerenzer and Todd, 1999). By leveraging heuristics, marketers can integrate qualitative insights with quantitative data, enhancing their decision-making capabilities. Guercini contrasts human intelligence with AI, cautioning against the assumption that automation is inherently superior. He advocates for integrating human judgment with automated efficiency (Davenport and Ronanki, 2018), recognizing the unique strengths of each. Ethical considerations are also paramount, with a focus on addressing biases in AI algorithms to maintain consumer trust and promote sustainable practices. The chapter posits that the future of marketing will hinge on combining automated systems with heuristic-driven decision-making. This synergy can enhance strategic planning while preserving the essential human touch in navigating complex marketing landscapes. In closing, Guercini calls for further research into effectively applying different heuristic models in automated environments and exploring their potential advantages over more complex decision-making frameworks (Huang & Rust, 2021).

Therefore, why is this a must-read book? “*Marketing Automation and Decision Making: The Role of Heuristics and AI in Marketing*” is a compelling exploration of how modern marketing practices are being shaped by artificial intelligence and the critical role that marketers’ heuristics continue to play. As Henry Ford’s assembly line redefined industrial production, bringing unparalleled efficiency and scale, AI is now transforming marketing by unlocking the power of vast datasets (Davenport *et al.*, 2020; Huang and Rust, 2021; Magni *et al.*, 2024). This technological shift is reminiscent of previous revolutions that

forever altered the decision-making landscape. In much the same way that managers once relied on emerging management science principles to guide factory workflows, today's marketers are turning to AI to optimize customer segmentation, predictive analytics, and communication strategies (Guercini, 2020; Jain *et al.*, 2024; Scuotto *et al.*, 2024). Yet, as in past transformations, human insight remains vital. Guercini's book offers not just a glimpse into the future of marketing but also a reflection on the natural progression of innovation throughout history. It emphasizes that while AI brings unprecedented precision and speed, human intuition – grounded in heuristic decision-making – still plays an essential role, much as it did when early business pioneers blended new technologies with experienced judgment (Guercini, 2019; 2022). This thoughtful balance between automation and human reasoning is what makes this book a must-read both for scholars and practitioners.

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