



THE EVOLUTION OF CONSUMER BEHAVIOR THEORY IN THE DIGITAL ECONOMY

Boltaeva Zinora Mirdjonovna

Associate professor, PhD

“Management and Marketing” department, Alfraganus University

zinora.mirdjanovna@gmail.com

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ABSTRACT

The digitalization of markets has radically changed the structure in which consumer decision making is constituted. Classical models of consumer behavior, which were based on the rational choice theory, less rationality, and behavioral economics, were formulated in settings where decision making was mainly done under personal cognitive limitations. Nonetheless, in digitally mediated marketplaces, the preferences of the consumer, the information exposure, and the sets of choice are co-determined by artificial intelligence systems, recommendation algorithms, and platform architecture. This essay critically examines how conventional consumer behavior paradigms are adequate in the algorithm economy. It is based on neoclassical theory, as well as the concepts of behavioral economics, platform economics, and algorithmic nudging, and represents a novel framework of consumer behavior as a co-evolutionary phenomenon between the human mind and AI. This paper claims the consumer agencies are no longer independent but are organized in algorithmic ecosystems. The results can be applied to marketing theory because they reinvent consumer behavior as a cognitive-algorithmic process and offer a theoretical basis on which a marketing strategy can be developed to adapt in digital contexts..

Over the decades, the theory of consumer behavior has been based on the supposition that people make decisions under cognitive restrictions but remain to have the final agency over their preferences and choices. Classical theories as the neoclassical theory of rational choice supposed constant preferences and utility maximization (Varian, 2014). Later theories brought in bounded rationality (Simon, 1955) and cognitive biases (Kahneman, 2011), acknowledging that the process of decision-making is not perfect and can be context-dependent.

The digital transformation has however restructured the decision environment. Online mediums filter information streams, recommend products to individuals, dynamically pricing, and reinforcement-learning algorithms to predict and drive behavior. Consumers do not just

respond to signals in the market anymore; they are engaging with smart systems that respond on the fly. The main question that is discussed in this paper is: Do classical models of consumer behavior suffice in explaining algorithm-driven digital market decision-making? We argue that they are not. As an alternative, we suggest a different conceptualization: Algorithmically Mediated Consumer Behavior (AMCB) where the results of decision-making are based on the interplay between human cognition and AI-based market infrastructures.

Neoclassical theory is a theory that represents the consumers as rational agents who opt to maximize utility within the constraints of a budget and given a stable preference (Varian, 2014). The process of decision-making is supposed to take place in the conditions of the coherent preference ordering and full optimization. Market structures are considered to be external environments where consumers make independent evaluations towards alternatives. The exogenous choice architecture assumption however becomes problematic in the digital marketplaces. The visibility of the alternatives, their ranking, and framing are determined by the algorithms. The consumers are no longer presented with a neutral collection of options but with an algorithmically filtered one. As a result, the utility maximization would be in a pre-defined decision space that the platform design would define. This reverses the analytical emphasis of internal optimization to the externally mediated preference activation.

The bounded rationality framework proposed by Simon (1955) disproved the idea that people are perfect optimizers by claiming that people are satisfied as they have limited capabilities in their cognitive processes and do not receive all the information they require. Both information processing limits and environmental complexity limit decision-making.

Bounded rationality conditions are aggravated by the digital environments. The abundance of information also results in cognitive overload that is compelling consumers to use shortcuts in their decisions. But, in contrast to the traditional contexts, the digital systems react dynamically to these constraints. The algorithms study consumer behavior and change the information flows. Bounded rationality is therefore a process of co-evolution between man and machine.

Behavioral economics also added to the knowledge of the decision-making process by determining the systematic cognitive errors like anchoring, loss aversion, framing effects, and the status quo bias (Kahneman, 2011; Thaler and Sunstein, 2008). Such biases indicate that consumer preferences are relative and they can be influenced by environmental influences. These behavioral insights are operationalized on a scale using digital platforms. Appearance, default, scarcity cues and customized suggestions serve as consistent nudging designs. The algorithmic nudging method is also real-time and adaptive, unlike fixed behavioral interventions. Thus, the psychological basis is behavioral economics, and the technological amplification is the digital systems.

Traditional models conceptualize decision-making as internally driven. Digital markets introduce a structural shift:

Table 1. Evolution of Consumer Behavior Paradigms

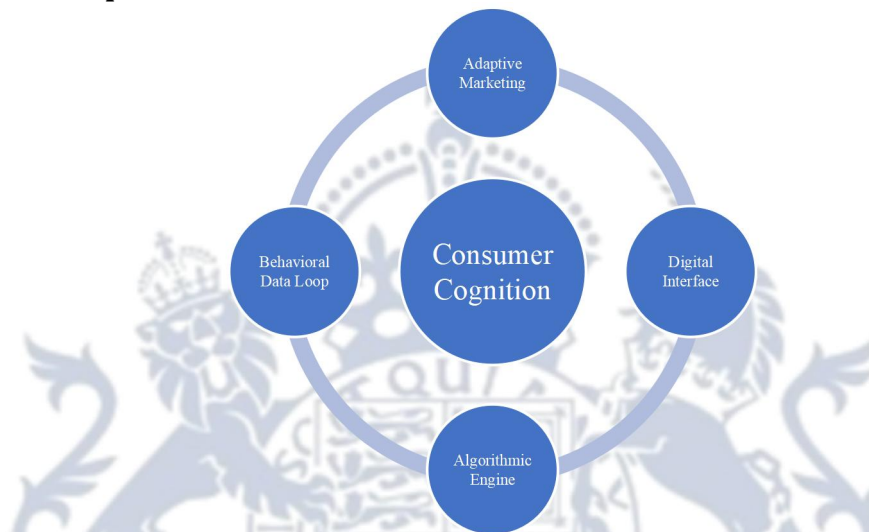
Paradigm	Decision Driver	Role of Environment	Level of Agency
Rational Choice	Utility maximization	Passive	High

Bounded Rationality	Cognitive limitation	Contextual	Moderate
Behavioral Economics	Bias & heuristics	Framing effects	Moderate
Digital Platform Era	AI-curated exposure	Active, adaptive	Shared
AMCB Model	Human-AI interaction	Co-evolving	Distributed

This shift implies that agency is no longer exclusively human but partially algorithmically mediated.

We propose that digital consumer behavior emerges from five interacting layers:

Figure 1. Conceptual Structure of the AMCB Model



The introduction of algorithmic systems into market structures brings the need to reconfigure the consumer behavior models theoretically. The suggested framework of Algorithms Mediated Consumer Behavior (AMCB) suggests three significant conceptual changes. In classical models, all the agency is vested in the decision-maker. Nonetheless, when human actions rely on algorithms, the end results of the decision-making process are somewhat influenced by AI systems that work to filter, prioritize, and personalize information. The agency thus gets spread between human thought process and algorithm mediation. Consumers are still decision-makers, only the format of their decision space is also externally co-produced.

According to the neoclassical theory, preferences are stable. Behavioral economics acknowledges the situational variability even though preferences are internal states. Digitally, the tastes are shaped in the form of feedback loops. The ability to be constantly exposed to customized content confirms some interests and disregards others. Algorithms are learner-friendly and increase the tendency of previous behavior and there is a possible likelihood that this diversity of choice decreases. It is therefore preference formation which becomes path-dependent and dynamically formed through technological mediation.

The algorithmic systems maximize the engagement, click-through, and conversion rates. This way they tend to strengthen high-probability behaviors. This leads to an effect of behavior reinforcement whereby past consumption habits become even more firmly established. In turn, consumer theory needs to consider the feedback dynamics, exposure

algorithms, and path dependency as the major variables of analysis. Digitally mediated consumer behavior transformation has profound strategic implications on the marketing theory and practice.

In the traditional type of marketing, communication was concerned with persuasion in order to influence preferences. Marketing is now happening at a system-architectural level in the digital ecosystem. Companies work out algorithms, recommendation systems, and adaptive interfaces, which model exposure conditions, but not the content of messages only. Strategic marketing practices are based on behavioral data in real-time. Compared to the traditional segmentation models that are founded on demographic groups, digital marketing is founded on micro-level behavioral indicators. The models of targeting are constantly adjusted by consumer interactions.

Due to the growth of algorithmic mediation, the issue of ethics is growing more serious. Too much personalization, a non-transparent recommendation system and manipulation of behavior threaten to destroy consumer confidence. Sustainable adaptive marketing would have clear governance, demystify artificial intelligence, and admiration of consumer sovereignty. Long-term value creation, both in terms of accuracy in prediction and in terms of remaining legitimate in digitally mediated markets, is a strategic dependency. Marketing is therefore a multidisciplinary system of coordination that involves the connection of cognition, technology, and strategy.

Classical theories of consumer behavior are still fundamental yet inadequate to interpret the digital mediated market decision-making. Algorithms infrastructures have changed consumption into a co-product between the human brain and AI systems. The suggested AMCB model offers a conceptual viewpoint on the understanding of distributed agencies, dynamic agency formation, and adaptive marketing designs. The AMCB model should be empirically tested in future through structural equation modeling and experimental designs as well as machine learning to validate the algorithm-consumer interaction dynamics.

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