

# The Exploration of AI and Concepts of Consumer Behavior

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## Abstract:

As the rapid development of artificial intelligence, AI is profoundly influencing the business field. This paper explores the relationship between AI and consumer behavior from nine dimensions through comprehensive literature analysis, empirical research, audience surveys, and case studies. These include demand identification and information search of consumer behavior. Taking FILA as an example, it dissects its strategies, problems, and solutions for applying AI. The research also shows that understanding all aspects of consumer behavior is crucial for enterprises. AI has a significant impact on consumers in marketing, product design, and customer service. The effective utilization of AI technology can enhance brand consumption experience, loyalty, and assist enterprises in precise marketing and technological innovation.

**Keywords:** AI, Consumer behaviour, Cultural influence, evaluation of alternatives, FILA.

## 1. Introduction

With the rapid development of AI technology, its impact on consumer behavior is increasingly significant. And it also brings new opportunities and challenges to the company. Thus, the essay will study the concept of consumer behaviour and combine them with AI, it will bring great benefits to both consumers and firms.

This part also provides a comprehensive overview of the following nine concepts associated with consumer behavior: 1. need recognition, 2. information search, 3. evaluation of alternatives, 4. purchase decision, 5. post-purchase behavior, 6. cultural influences, 7. social influences, 8. psychological influences, and 9. decision-making styles.

The case study of my topic is FILA, which is positioned as a high-end sports fashion brand. The target-

ed audience is mainly 20-30 years old young people. They pursue quality and fashion personality. FILA brand image integrate Italian elegance and vitality, products are both sporty functional and fashion, the price is also in the middle and high-end level. The reasons that FILA is chosen as the case study are as follows. The brand FILA has high international visibility and it actively applies AI technology such as intelligent recommendation system customer service. Moreover, FILA accumulates rich consumer data because of its high degree of digitization.

Then the chosen brand, FILA will be mentioned to analysis how AI technology are penetrated in various aspects of consumer behaviour. And how managers employed AI in brand position, design and marketing. And now there is a heated debate that is to explore the relationship between AI and consumer

behaviours.

## 2. Lecture Review

Consumer behaviour is a complex and multidisciplinary field of study. It includes the actions taken by consumers to obtain, use or dispose of consumer goods or services.

Kotler and Keller (2016) think need recognition is the start of the consumer behaviour. It occurs when there is a gap between current and expected state. And this recognition comes from internal stimuli or external stimuli. After need recognition, consumers search information to gather available choices.

Schiffman (1997) argues consumers begin to search for relevant information in memory (internal search). If internal information is insufficient, they will turn to external information sources, such as the Internet, salers and friends. Following searching information, AI will research the price, performance, quality and after-sales service of the product and store. Then the data will help them construct evaluation criteria to select products that better meet the needs of buyers (SH Mrisha &S Xixiang, 2024).

Ajzen (1991) thinks various factors will influence final purchase decision including the attitudes of others, perceived behavioral control, and situational factors. So AI should detect this influencing factors and make individual and reasonable strategies. Then post-purchase behavior occurs.

If consumers are satisfied with the performance and after-sales service of product, they are more likely to buy it again and recommend it to others, while they will return goods and make negative review (Hari Sridhar,1936).

Lau, L and Aaker, J (1998) contend different types of culture have different influences on consumer behavior. Hofstede's cultural dimension model is also introduced. These dimensions determine the differences in values between different cultures and their impact on consumer preferences and various social behaviors.

The social influence also impacts the consumer behaviour. Research shows that consumers often rely on the opinions and recommendations of their online connections when evaluating products. It highlights the power of user-generated content(Deutsch, M., & Gerard, H. B., 1955).

Borgardt, E (2018) explains that motivation is the inner driving force. And different motivations, such as physiological motivation and psychological motivation, lead to different purchasing behaviors of consumers.

Different consumer have various decision-making styles.

They range from highly rational and analytical to impulsive and intuitive. And they relate to eventual purchasing behaviour (Sproles, G. B., & Kendall, E. L., 1986).

Ribeiro, Ana, and Rivero(2024) consider AI now has deep engagement in and has impact on every progress of consumer behaviour. Understanding these concepts and make them have a clever combination of AI assist marketers and businesses to develop effective strategies. It is good for attracting and retaining customers by addressing their needs and preferences. Moreover, by examining the interplay of psychological, social, cultural, and situational factors mentioned above. Businesses can design marketing campaigns that resonate with target audiences and drive final purchase decisions.

In my opinion, AI participates in the consumer behaviour to a large extent. It impacts each process of consumer behaviour. It even can predict the future popular trend based on consumer behaviour. This can help designers adjust schemes to adapt the current. AI brings lots of convinence to consumers. It makes manangers to have effective method to collect useful and comprehensive data. And AI help company to save more resources and gain more interests. While AI brings benefits to people, at the same time it also has some risk. It may cause consumers are at risk of being misled, risk of unfair treatment of consumers and privacy leakage. So my article topic is about how to make a good use of AI in consumer behaviours and improve their marketing strategy (FILA).

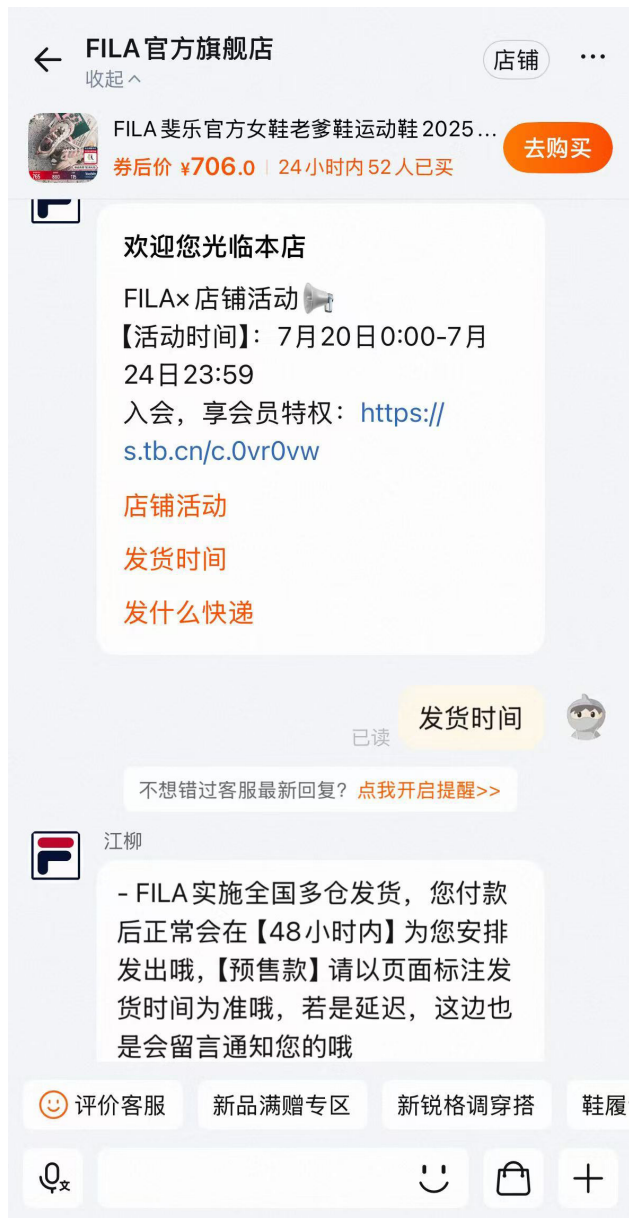
## 3. Results

### 3.1 Opportunity

From the website data of FILA company, the study displays AI and consumer behaviour now have a deep integration. AI of FILA engages in need recognition, information search, post-purchase behavior, social influences and psychological influences. It brings much facility and interests to company and consumers. I will show the details as follows:

The application called Red Book shows AI identify needs for the shoes of FILA based on browsing history and time in other softwares. And then AI recommend some related posts of FILA brand.

The figure 1 is from Taobao. It shows the FILA use AI to help answer some easy questions in the after-sales service. I will show the tool of AI employed in post-purchase behavior.



**Figure 1 The chatting interface with AI customer service**

FILA official website shows suitable influencers are analysed and identified by AI of FILA on the basis of their flow rate and style. And FILA cooperate with suitable stars by using their network to spread their products. This graph is from Taobao. It displays the AI chatting system of FILA sends many messages like coupon to consumer. I will shows the function of AI on psychological influence.

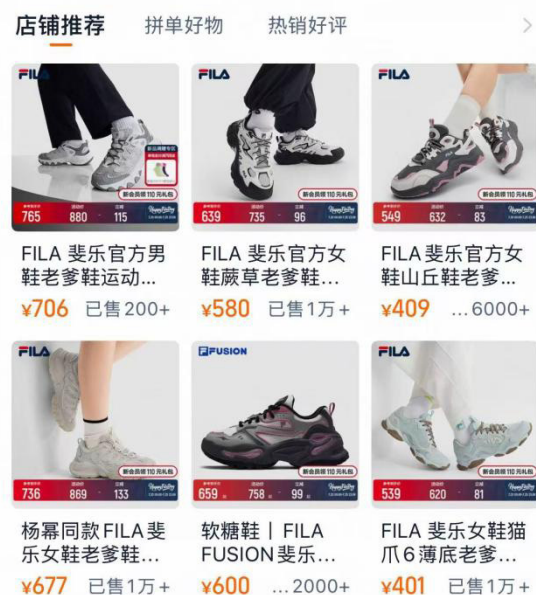
### 3.2 Challenges

However, there are also some challenges and it needs improvement. FILA should focus on some problems about the cultural influence. First is that coordination of cultural

differences is difficult. It because regional and individual cultural differences are large, AI is difficult to accurately meet individual needs, such as European, American and Asian consumers have different preferences, and consumer values and preferences in the same region are also different, while AI is difficult to grasp. Next is brand cultural transmission bias. AI may not accurately convey FILA's core brand values. And It may misinterpret and abuse cultural elements, affecting brand perception and attractiveness.

FILA official website displays brand cultural transmission bias. The AI sends this advertising and recommend related products to consumers from various countries. Because FILA wants to sell products co-branded with the Palace of Versailles. While people who do not understand the culture may get uncomfortable when they see the strange picture in the poster. It may caused by cultural differences. FILA also needs to pay attention to the challenge about evaluation of alternatives. First problem is about dynamic changes in consumer demand. Then is about data quality and interpretation problems.

This picture is from a shopping website called Taobao. It showcases website will provide similar products to add your choices after consumers search for a product. But the products FILA website recommends may too monotonous, It bases on Browsing history, purchase history, sales and reviews. While consumers' needs and preferences continue to evolve and data may contain fake comments. And the substitute only presents in pictures, it is hard to make a comparison.



**Figure 3 Related recommendation of the FILA shoes**

## 4. Discussion

### 4.1 Dissection

One of the reasons for culture problem is cultural differences are difficult to reconcile. For the data problems, Sample bias and incomplete information exist in the collected data on cultural differences, and it is difficult to convert them into usable structured information. And for the limitations of the algorithm, The general algorithm lacks flexibility and adaptability, which is difficult to dynamically adjust according to cultural differences, and it is difficult to obtain feedback required for optimization.

The another reason is deviation of brand culture communication. For semantic misreading, due to the lack of cultural background knowledge AI could not accurately convey the core values. Another is for creative imbalance, relying too much on data-driven, ignoring creative innovation, resulting in rigid brand communication, difficult to stand out in the market.

According to the challenge about evaluation of alternatives. First problem is about dynamic changes in consumer demand. Consumer needs and preferences continue to evolve, and AI struggles to capture these changes in real time. It results in lags in the evaluation of alternatives.

Then is about data quality and interpretation problems. AI systems rely on a large amount of data to evaluate alternatives. For completeness, the data collection may be limited in scope and may not give a full picture of the market. For accuracy, consumer evaluation data may be affected by promotional activities, brand image and other factors. And they give an subjective review. For timeliness, market dynamics change fast, consumer preferences are constantly evolving. But in practice, data updates can lag. They all result in AI misjudgment of the performance and reputation of alternatives.

### 4.2 Recommendation

In terms of culture influence, I want to create a “Cultural Intelligent Adaptation System”.

The first step is about cultural data collection and analysis. AI is used to collect data on the preferences of consumers in different regions for fashion, sports culture and the perception of FILA brands from a variety of channels.

Then Using data analysis algorithm, these data are classified and sorted to find out the characteristics of different cultural groups and form a clear portrait of cultural preferences.

Next step is about AI personalized recommendation optimization. When consumers visit the platform, the system not only considers their purchase history and browsing behavior, but also combines the preferences of their cultural

groups to recommend products that better fit their cultural aesthetics.

Finally, using AI monitors feedback data in real time and quickly adjusts recommendation strategies, so that FILA can adapt to consumer cultural needs in a timely manner and continue to enhance consumers’ purchase willingness to the brand.

According to evaluation of alternatives, I want to invent “Virtual fitting”.

The first step is to embed with advanced virtual fitting technology to the application. The AR and 3D modeling technology are used to present realistic virtual fitting effects for users. It includes fabric texture, color accuracy, and product details.

Next is to add multi-scene display and interactive function. It enables consumers to see how FILA products are worn in different scenarios, enhancing their perception of product suitability. It also provides interactive features that allow users to freely adjust the color, pattern, material and other elements or match different pieces. It is to stimulate consumers’ creativity and participation, but also help them better understand the diversity of products and personalized matching possibilities.

Finally, the tangled products will be displayed in one interface. And AI make a visual comparison about their price, quality, appearance and reviews.

## 5. Conclusion

This study explores the complex relationship between artificial intelligence (AI) and consumer behavior. AI technology is being used in marketing, recommendation and customer service to transform the consumer decision-making process. Intelligent recommendation improves purchasing efficiency and satisfaction and AI customer service improves service experience. At the same time, the change in consumer behavior is reacting to the development of AI. Consumers have growing demand for personalization, convenience, and privacy protection. It promote enterprises to adjust their AI strategies. Consumer usage habits provide guidance for developers, It promotes the popularization of AI innovation in multi-consumption fields, and accelerate the process of AI landing. Through comprehensive analysis of case study and theoretical research from multiple aspects, it reveals the significant impact of AI on consumer behavior and also discusses the counter-effect of changes in consumer behavior on the development of AI. It provides a all-round perspective for understanding the dynamic interactions in this emerging field.

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