

The Future of Marketing: How Artificial Intelligence is Influencing American Consumer Behavior

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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STS Research Paper

Introduction

Although in recent years there have been many so-called “revolutions” in the marketing world with events like the digital age and even the much more recent COVID-19 pandemic, the marketing world is on the cusp of a new revolution of a scale never seen before: the rise of artificial intelligence in marketing. By design, marketing is constructed to understand, learn, and ultimately influence the purchasing behavior of consumers to match them with products or services (Davenport et al., 2021). Artificial intelligence (AI), which is a technology created to learn patterns and predict such behaviors, will have a clear and significant impact on consumer behavior as the technology gains popularity in the field of marketing and advertising. Although the digital age and, to a smaller extent, the COVID-19 pandemic have had a significant impact on how consumers make purchasing decisions, neither event has had the ability that artificial intelligence has to process and understand the copious amount of consumer data that exists in the world today. To examine this clearly nuanced relationship between artificial intelligence and consumer behavior, this paper will utilize the Technological Determinism STS framework to answer the question: how will the age of artificial intelligence affect modern American consumer behavior?

Historical Background Information

In order to properly explore how this new technology will influence American consumer behavior, it is important to examine modern American consumer behavior. After WWII, American consumer behavior went through a defining period. Wartime production helped bring America out of the great depression and soldiers were coming home to more jobs, higher wages, and with that a rise in spending power (Public Broadcasting Service). In response to this

American consumer behavior moved beyond purchasing just necessities, but focused on the mantra of “more, newer, and better” which rings true even to this day. Although large paradigm shifts in general consumer behavior occur as a result of things like the digital revolution, the average American consumer differs greatly than that of other global consumers. American consumers are generally more financially confident than that of other areas, whereas consumers in other countries often live paycheck to paycheck, often changing the ways they react to different shifts in marketing (Magni et al., 2018).

In addition to understanding American consumer behavior, it is equally important to examine the history of marketing and more recent major “revolutions” in the industry. More specifically, the digital age and the current COVID-19 pandemic and how these events have shaped the marketing world and in turn influenced modern consumer behavior. Consumer behavior, or “the study of consumers and the process they use to choose, use (consume), and dispose of products and services, including customer’s emotional, mental, and behavioral responses (Radu & Panaitescu, 2021),” has continued to evolve. Before the digital age, consumers would go to stores and purchase products that they are familiar with or that have a good reputation. Consumer behavior was heavily influenced by both word of mouth, as well as opinions on certain products. Marketers then were heavily reliant on the mantra of “advertise it and they will come” since if a consumer was able to recognize their product from either a short advertisement on TV or a billboard, they would be inclined to purchase a product and potentially become a loyal customer (Su, 2018). The digital age, however, would see a proliferation of information through devices and inventions such as the smartphone, personal computer, the internet, etc. Equipped with these new tools, consumers have become increasingly independent in their own purchasing decisions (Su, 2018). The digital age not only brought with it information, but also choices to consumers as

a result of things like online shopping. Consumers would no longer be gated by what is offered locally, rather, they would have access to goods internationally as well. The power dynamic of the consumer and companies was reversed, with companies having to be more intentional with catering towards each individual consumer rather than casting a large net to a wider audience. As a result, marketers began to find new ways to compete and influence consumer behavior to achieve their same end goal: to personalize the consumer experience and create loyal customers.

As the digital age is coming to its end, the rise of artificial intelligence has begun. With newfound interests in big data, machine learning, and artificial intelligence, marketers have begun devising new strategies to accomplish tasks such as content curation and creation, chat bots, behavior analysis and predictive analytics, and AI enhanced digital marketing (Hall, 2021). In a recent survey in 2020, 41% of respondents saw an increase in revenue and improved performance metrics through the use of AI in their own marketing campaigns (Guttman, 2021). With its obvious relevance to marketing, there is an implied effect on consumer behavior and how the consumer market itself will evolve as a result of newer AI technology.

STS Framework

Technological Determinism is used to analyze the effects of AI on modern American consumer behavior. In the framework, Author Merritt Roe Smith describes technological forces as “an autonomous force, completely independent of social constraints (Smith, 1994).” More specifically, Smith describes two different forms of determinism: hard and soft; with hard determinism describing technology as a standalone entity that is not at all shaped by society, and soft determinism describing technology as the primary driving force, but with a chance of human intervention to influence it. The effects of artificial intelligence as a “soft” deterministic force are

explored and ultimately used to make predictions on how AI will influence American consumer behavior.

However, noted critics such as Raymond Williams, note that technological determinism is a stark oversimplification of the relationship between society and technology. Additionally, it fails to address the significance of social power relations and its impact on the nature of technology (Wei, n.d.). Additionally, other critics also argue that that technology itself is socially determined and that both society and technology co-evolve in a non-deterministic process (Adler, 2006).

Mihály Héder's paper, *AI and the Resurrection of Technological Determinism*, addresses these criticisms and how they have led to the general dissection and decline of the framework, however, cites that the framework has found stronger "footing" within the context of AI (2021). Héder argues that AI does fit within the framework of technological determinism because of its nature. He states that "an autonomous – which in this case only means self-driven, proactive intelligent behavior – AI agent present entirely different problems for social control" (Héder, 2021). Whereas previous technologies can be argued to not have any influence on society due to its static nature, the fluid autonomous and non-deterministic behavior of AI presents itself as a technology that serves as an agent rather than an object.

Methods

The main methodology used is the examination of historical case studies. Before that however, this paper will first examine how exactly artificial intelligence is growing and will grow in the marketing space and understand how that will impact American consumer behavior specifically. Then, historical case studies on the origins of American consumerism in the early

20th centuries and the birth of modern American consumerism in the post-WWII era will be examined in order to establish the necessary context and definitions needed to make predictions about American consumerism. Since information and data on how American consumer behavior has shifted in response to artificial intelligence is sparse, more modern shifts in marketing, such as the digital age, are used to draw conclusions for the future implications of AI in marketing. Technological determinism is used to illustrate how the advancement and use of AI in modern marketing strategies will drive change in American consumer behavior. More specifically, the paper will explore how technological determinism has impacted American consumer behavior chronologically throughout American history and how those technologies compare to AI, relative to their respective types of technological determinism.

Results and Discussion

Although still in its infancy, artificial intelligence is already making an impact in the marketing world. AI is currently primarily being leveraged to boost the return of investment (ROI) of marketing campaigns by using big data analytics, machine learning, and other processes to gain customer insight (Hall, 2021). AI is also being used to streamline and automate many processes such as content curation, generation and even web design. These methods of using AI are still dependent on human ingenuity and still need some sort of human intervention to make a connection with customers. However, more autonomous strategies such as AI-based electronic billboard delivery systems are slowly becoming more and more prevalent and offer much more powerful solutions. These automated systems place “the right kinds of ads in front of the right kinds of people based on complex algorithms and big data (Hall, 2021).” As digital marketing evolves, marketers are slowly realizing that beyond creative ad campaigns, targeting specific demographics and delivering the appropriate messages are more important. AI offers a

completely autonomous and optimized experience and can also reach scales that have never been seen before. Another game-changing AI experience would be the use of chatbots. Although a bit rudimentary currently as they generally are only able to answer customers' frequently asked questions, they provide a solution to problems such as labor shortages and long response times. In the future, smart chatbots may even become virtual salesmen which will completely shape generation and customer service.

American consumer behavior has a complex and nuanced history and an equally unclear future. However, with the rise of artificial intelligence, marketers can expect American consumers to demand higher quality service and products, more personalized purchasing experiences, as well as a shift from primarily brick and mortar retail strategies to personalized digital experiences. The history of American consumer behavior as well as studying some of the other socioeconomic factors that contribute to it provides a lens through which the effects of artificial intelligence can be determined.

The modern notion of American consumerism had its roots beginning in the late 19th and early 20th centuries (Higgs, 2021). By the late 1800s shops in the United States began expanding through strategies such as mail-order shopping, the opening of large department stores, and retail moving from small family-owned businesses to large corporations that possessed the necessary resources to upscale production in order to bring down prices for the average person to afford these commodities (Higgs, 2021). By the end of WW1, America saw production increase 12-fold in the 1920s compared to the 1860s whereas the population only increased by 3 times (Higgs, 2021). This spike in economic growth in proportion to the population helped provide the average American financial security which contributed to this new "Economic Gospel of Consumption"

that is seen throughout the “Roaring Twenties” which was defined by lavish spending and lots of borrowing.

A similar wave of consumerism would arrive in the aftermath of WWII as well. Risky borrowing and poor financial decisions throughout the 1920s eventually spiraled out of control and sent the American economy straight into the great depression. During this time, consumerism was put on pause and survival was at the forefront of everyone’s list of priorities. However, WWII would again see an influx of jobs being created during wartime production and revitalized the American economy. The combined forces of a generation that was deprived of consumerism for over 20 years by the effects of the Great Depression as well as the world war and a surge in spending power, American consumerism rose to new heights. However, with the saturation of the American market during this period, manufacturers and marketers began to shift their strategies from targeting mass markets to segmented markets (Silverthorne, 2003). The American consumer market would see a shift to a more interactive purchasing process where potential customers would exercise significant influence over marketers. This change would be especially important in the 60s and 70s where “identity politics” was taking center stage in American culture with social and cultural groups such as African Americans, women, and youth beginning to assert themselves in a way that could not be ignored by marketers (Silverthorne, 2003). In an interview with author Lizabeth Cohen, she states: “In some ways, the attractiveness of subcultures as markets granted them legitimacy, even authority (Silverthorne, 2003).” As a result these subcultures began to dominate the American consumer market and that change has propagated all the way until now.

It is important to note, however, that within all the social, political, and economic factors that have changed American consumer behavior in the past, for the purposes of this paper it is

important to analyze how different technologies during those times also influenced American consumer behavior. The first key technology that influenced modern marketing strategies was the invention of the radio. The commercial radio was created in the early 1920s and served as a “privately owned utility, pumping information and entertainment into people’s homes (Higgs, 2021).” The proliferation of radio systems around American households, as well as the fact that it did not require any sort of literacy to understand it as well as it being a free service gave marketers unprecedented opportunities to influence consumer behavior (Higgs, 2021). The invention of the radio directly contributed and influenced the mantra of more is better in the 1920s as large corporations were able to just continually pump consumers with information about more and more products. Additionally, after WWII, the invention of the modern television assumed a very similar role to the invention of the radio. Instead of only through sound, the television gave ways for marketers to appeal to a consumer's visual perception of products, significantly magnifying the effects of advertising schemes. In terms of technological determinism, the relationship between society and the radio and television in this case can be seen more as soft determinism since although it is clear the invention of these technologies were the driving forces in the bombastic consumerism seen in these ages, they were still influenced by society and were used somewhat like tools by these large corporations and manufacturers.

Just from a brief glimpse of the short history of American consumerism provides a window of opportunity to understand and make predictions about how American consumer behavior will change. As seen in the 20th century, American consumer behavior is extremely nuanced and susceptible to change based on world events. For example, in both waves of American consumerism, they came about as a result of wartime production stimulating the American economy. However, it is important to note that stimulation in the economy does not

only result from wars but can come in the form of changes in public policy or other methods. As the AI revolution unfolds, it is important to understand that the relationship between consumer behavior and historical paradigm shifts is multi-faceted and more complex than just different kinds of advertising. AI specifically compared to television and radio presents a much more complex relationship because the control over the way AI behaves is not as tight as what was seen with the radio and the television. Although there is still some influence of society on AI, it is much more autonomous in nature thus edges closer to the lines of a harder determinism than the radio and television were in the 20th century.

In contrast to the traditional approach to marketing where businesses followed the mantra of “the customers will come to us,” the digital age is all about the personalization of the customer experience. With the internet and the rapid growth of mobile technology and social media, traditional marketing strategies will no longer be able to survive amidst the age of e-commerce. The beginning of the digital era saw the birth of multichannel retailing where companies began to take their business online with e-commerce as well as offering traditional brick and mortar retail sites. As e-commerce began to grow in scale, consumer standards began to grow to never seen before levels since if one retailer cannot meet a customer’s standards, another one is just a click away (Tenser, 2019). For example, Amazon Prime’s free, within-hours delivery has slowly become the “yardstick against which all delivery expectations are measured (Tenser, 2019).” Other standards such as customer-benefiting return policies are also extremely prevalent. These new equivalent experience expectations and standards introduce a whole new level of complexity and nuance to consumer behavior analysis because approaches to marketing were no longer about marketing how useful or good a product may be, but how to create a unique and personalized shopping experience for consumers that also provides the best service standard that

is experienced everywhere else. Again, the digital age and rise of e-commerce can be examined through the lens of technological determinism quite clearly. The accessibility of new technologies such as the smartphone and the internet not only created a surge of online businesses, but also expanded the general consumer's shopping experience from a local to a global stage. Since consumers have the ability to choose from so many options, they also obtained the power to more strongly influence retailers and businesses as standards for service and quality naturally rises as the number of options also rises.

Despite the fact that AI still has a long way to go, current developments offer a roadmap to the future. AI-based electronic billboard delivery systems and smart chatbots are only the tip of the iceberg – AI marketing strategies will eventually become more and more autonomous in nature. Currently, the relationship between AI and society hovers around soft determinism, however, given more autonomy, that line could very quickly approach hard determinism. Given the history of how American consumer behavior has evolved since the early 1900s as well as the trajectory of the current AI boom, we can expect American consumer behavior to (1) see an even larger increase in the standards of service, (2) become even more personalized, and (3) move more towards a digital platform.

As seen in the digital age, expectations of retailers and the services provided have reached new highs. With the prevalence of AI, consumers will expect not only a more personalized experience, but an expectation that content that is generated or curated is appealing to them. More importantly, however, is that modern consumers crave immediacy (Ahmad, 2021). It is becoming more and more apparent that consumers consume products and services that they need or want and with AI, people are expecting information about products and services to be delivered quickly and seamlessly. As AIs such as chatbots become more prevalent and

advanced, the average American consumer will expect the experience to be similar to talking to a sales representative and demand top speed but also quality service.

Furthermore, as this technology gets more and more advanced, the capabilities and expectations of a personalized experience will also be more and more important. Similar to how the radio and television transformed the consumer experience into a much more personalized experience, AI echoes many of the same sentiments, if not amplified. Whereas identity politics was important in the 1960s and 70s, we are seeing a resurgence of a focus on individual identities, whether that be race, sexuality, political affiliation, etc. The use of personalizing experiences using AI will only seek to amplify this effect as AI will much more effectively and efficiently analyze and process the copious amounts of consumer data floating around the world today. Especially as AI moves on to become more autonomous, it would not be too far off to see personalized AI marketing entities that understand and can act as a personal guide for a certain product, thus creating an even more personalized consumer experience than what we already have today.

In terms of American consumerism's short history, technologies such as the radio, television, and the digital age (including things like the internet, smartphones, computers) are definite examples of soft determinism. For the radio and television, both were primarily used as tools by marketers as they offered unparalleled means to reach everyday American households. Despite the radio and television's proliferation in the everyday American's life and their impact on American culture, in terms of American consumer behavior, society still remained as the driving proponent. The digital age, however, brought upon technologies where the line becomes a little bit blurred. On one hand, the proliferation of technologies such as the internet and smartphone served as the groundwork for marketers to establish digital marketplaces and were

primarily used as tools very similar to the TV and radio; however, on the other hand, the scale and magnitude of the impacts that these technologies have on consumers, such as the introduction of a global marketplace and unprecedented amounts of choice, have shifted consumer behavior independent from society, thus edging more along the lines of hard determinism. There is a clear trend that as the scale of impact that a technology has on society grows, the closer they approach a more strict hard determinism.

In the lens of technological determinism, modern insight driven AI-solutions lie past this blurred line that modern digital technologies have introduced, however, still remains close. Although modern AI are still potent and powerful, they are still primarily used as tools for marketers to influence consumers. AIs have, however, still influenced consumer behavior in the sense that they are driving demands for highly personalized customer experiences. In order to stay afloat, companies are forced to utilize AI solutions in as many aspects of their businesses as possible which drives society to expect more and more. Compared to the television and radio, and even to a certain extent digital age technologies, AI has begun revolutionizing consumer behavior in a manner that is highly specific and targeted. However, looking ahead, as AI becomes more and more sophisticated and autonomous in nature, it is clear that it will become the driving force in the consumer-technology relationship as it will continue to learn and grow in ways that have never been seen before.

Despite what was previously mentioned, there are extreme limitations to these predictions. Firstly, it is unclear exactly what the future of AI really is. There are many social, political, and ethical considerations that may impede its development despite the fact that it is the future technology that the world has its eyes on. With this, it is uncertain whether or not we will see fully autonomous AI compared to the insight-driven AI solutions we see today. Additionally,

making predictions about American consumer behavior in response to only AI is a naive approach. As seen in history, American consumer behavior is highly complex and influenced by a multitude of factors including things like war, economy, politics, etc. It is impossible to predict exactly what the state of the world would be and how that will affect other social aspects which in turn would influence consumer behavior. However, given the limited amount of information currently available, regardless of what the future of AI and the world will hold, it is clear that as a technology, AI will cause a large paradigm shift in how the world views consumer behavior and choice.

Conclusion:

American consumer behavior as a result of the creation and proliferation of AI in marketing strategies will see significant change similar to what was seen in post WW1 and WW2 America. Although the future of AI may be unclear, we can use America's history to predict that it will have a clear influence in how American consumers view standards of service, personalized purchasing experiences, and modes of consumption. Despite this however, it is unclear to what extent these changes will occur. If AIs reach a level of autonomy where they are allowed to be completely autonomous, consumer behavior could see change on a scale never seen before. However, if it continues to be marred by ethical and socioeconomic concerns, then its influence on consumer behavior may be to a lesser extent. Regardless of the degree of autonomy and freedom, AI will clearly start what may be the next big paradigm shift for American consumers.

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