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Application of the ABC Model of Attitudes (Affective, Behavioral, and Cognitive) in the Age of AI-Generated Videos

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Abstract

The emergence of AI technologies, such as machine learning and neural networks, has transformed content creation, encompassing both text and video production. Generative AI, represented by tools such as OpenAI's GPT and DALL-E, enables the production of hyper-realistic movies, profoundly influencing sectors including entertainment, marketing, and education. This study analyzes the impact of AI-generated movies on consumer sentiments utilizing the ABC model, which includes Affective, Behavioral, and Cognitive elements. Emotional reactions vary from interest to dread, shaped by perceived authenticity and ethical considerations. Behavioral effects encompass distrust and reduced trust, whereas cognitive dimensions underscore apprehensions regarding media credibility and ethical utilization. This review paper highlights the significance of cultural and demographic influences on consumer views and stresses the necessity for rigorous techniques and cross-national studies to investigate attitudes toward AI-generated material. Subsequent research ought to examine the emotional, behavioral, and cognitive aspects to improve comprehension and adoption of AI systems.

Keywords: AI-generated Videos, Consumer Attitudes, ABC Model, Affective, Behavioral, Cognitive, Generative AI

Introduction

The capabilities of AI originate from fields like machine learning, where computers acquire knowledge from data without direct programming, and deep learning, a subset modeled after the brain's architecture known as artificial neural networks (LeCun, Bengio, and Hinton, 2015). This advancement enables AI to execute repeated tasks while also adapting to novel situations and producing outputs derived from acquired data (LeCun, Bengio, and Hinton, 2015). The incorporation of AI into content development signifies a substantial advancement in the domain. Initially focused on basic text-based material, AI's involvement in content creation has swiftly evolved to encompass more intricate formats, such as video production. Generative AI has expanded the limits by producing novel content, shown by technologies such as OpenAI's GPT for text and DALL-E for graphics. These developments have established the foundation for tools that can produce realistic video content, exemplified by OpenAI's Sora tool (OpenAI, 2024; Roman, 2023). AI systems examine existing videos to comprehend style and structure, subsequently producing new videos that replicate human-generated content, impacting diverse sectors from entertainment to education (Roman, 2023). AI-generated movies signify a revolutionary transformation in content creation, utilizing sophisticated machine learning and neural networks to generate original videos from basic text prompts (Roman, 2023). These tools democratize video

creation, allowing people to create professional-quality videos without conventional filmmaking resources. The technology's capacity to amalgamate diverse creative styles has resulted in viral occurrences, including distinctive brand partnerships and celebrity deepfakes (Roman, 2023). Consumer attitudes, defined as enduring evaluations of individuals, items, advertisements, or concerns, significantly impact the acceptance and utilization of AI-generated movies (Solomon, Bamossy, Askegaard, and Hogg, 2016). An attitude object refers to any entity that elicits an attitude from an individual. According to the ABC Model of Attitudes, attitudes consist of three components: Affective (emotions and feelings), Behavioral (behaviour and intentions), and Cognitive (thoughts and beliefs). These components are shaped by factors such as media portrayal, personal technology experiences, and societal norms (Solomon et al., 2016). Comprehending these elements is essential for investigating customer perceptions, interactions, and thoughts regarding AI-generated videos (Solomon et al., 2016).

Consumer Attitude Towards AI

AI-generated films profoundly influence consumer attitudes, especially when analyzed through the ABC model of attitudes, encompassing Affective (emotions), Behavioral (actions), and Cognitive (beliefs) components (Solomon et al., 2016). Although these videos present novel opportunities, they also elicit worries that impact every aspect of consumer attitudes. AI-generated videos can elicit many unfavorable emotions. The hyper-realism of deepfake films can instigate worry and anxiety around privacy infringements and potential abuses, like blackmail or cyberbullying (Jay, 2023). These emotions serve as instant reactions and may also cultivate enduring suspicion and unease towards AI systems (Jay, 2023). Ma, Dai, and Dang (2023) underscore the necessity for additional research on the precise impact of various negative emotions, including guilt and annoyance, on attitudes towards AI-generated videos. Affective responses to these movies might differ significantly among persons and cultures, challenging the widespread acceptability and emotional resonance of such content. The PBS Newshour program underscores the potentially perilous consequences of AI systems generating hyper-realistic videos, exacerbating emotional discomfort among customers (PBS, 2023). The behavioral responses to AI-generated movies are shaped by the perceived authenticity and intention of the content. As AI-generated films gain prominence, viewers may develop increased skepticism and defensiveness, leading to less engagement and reluctance to endorse such content. Arango, Singaraju, and Niininen (2023) assert that awareness of synthetic material may foster beliefs of manipulative purpose, hence diminishing the efficacy of emotional appeals in marketing and advertising. This skepticism may result in diminished engagement with and confidence in AI-generated content, adversely affecting consumer behavior. The swift progression of AI in video production prompts apprehensions over content legitimacy and the possibility of misuse, hence affecting customer behavior (Roman, 2023). The cognitive impressions of AI-generated videos are influenced by views regarding their authenticity and ethical ramifications (Solomon et al., 2016). The PBS Newshour episode highlights the potentially perilous consequences of AI algorithms that generate very realistic videos, including the deterioration of faith in visual media (PBS, 2023). When consumers question the validity of visual content, it undermines their cognitive beliefs regarding media credibility, resulting in increased skepticism towards AI technologies. Persson, Laaksoharju, and Koga (2021) emphasize the significance of acknowledging cultural variances and personal characteristics in influencing cognitive perceptions, as distinct populations may interpret and respond to AI-generated content differently.

Numerous constraints and avenues for future investigation require attention to enhance comprehension of customer perceptions regarding AI-generated videos. Ma, Dai, and Dang (2023) advocate for more sophisticated inquiries into the impact of various negative emotions, beyond

fear, disgust, wrath, and sadness, on views. Adding to this, Persson, Laaksoharju, and Koga (2021) stress the need for methodological rigour and consideration of different AI types and cultural contexts to obtain more reliable data. Latikka, Bergdahl, Savela, and Oksanen (2023) emphasize the significance of cross-national studies in comprehending the impact of cultural and technological contexts on AI acceptability. Wang, Zhou, Ma, Li, Ai, and Yang (2020) advocate for the inclusion of a broader range of stimuli and the analysis of demographic variables, including age and gender, that influence perceptions of AI-generated material. Demmer, Kuhnapfel, Fingerhut, and Pelowski (2023) advocate for investigating emotional connections and perceived goals in AI-generated art to understand consumer emotional engagement with AI-generated media.

ABC model of attitudes (Affective, Behavioural, and Cognitive)

The ABC model of attitudes, created by Daniel Katz in the 1960s, is a psychological framework that breaks down attitudes into three components: affective, behavioral, and cognitive. The affective component is about how we feel emotionally about something, like whether we like it or hate it. The behavioral part involves the actions that come from a person's mood, like buying a product or staying away from something. The thinking part is about what a person believes or thinks about something they have an opinion on. Together, these components provide a complete understanding of how attitudes are formed and how they can affect behavior (Eagly & Chaiken, 1993). The model is commonly used in psychology, business, and studies on social influence.

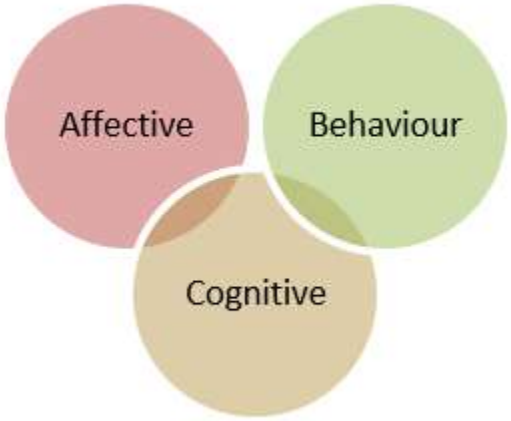

Figure 2.1: ABC Model of attitudes (Solomon et al., 2016)

Affective Component towards AI

The affective component involves the emotional reactions individuals have towards objects, significantly influencing consumer attitudes (Solomon et al., 2016). Recent studies explore the emotional dynamics between humans and artificial intelligence (AI) in various contexts. For instance, Ma, Dai, and Deng (2023) found that AI's success over humans in competitive tasks can trigger negative emotions like fear and anger, leading to adverse sentiments towards AI. Conversely, Persson, Laaksoharju, and Koga (2021) noted that in Sweden, increased exposure to AI through media reduces anxiety and fosters curiosity, suggesting that familiarity can mitigate negative emotions. Latikka et al. (2023) highlighted a divide in perceptions of AI in art among Finnish adults, with some finding it intriguing while others view it as strange, indicating that concerns about authenticity affect emotional responses. Wang et al. (2020) demonstrated that different video content types elicit varied emotional reactions, with pet videos often evoking happiness and gaming videos inciting surprise or fear. Demmer et al. (2023) found that AI-

generated art can engage viewers emotionally, though human-made art typically elicits stronger reactions. Additionally, Arango, Singaraju, and Niininen (2023) observed that awareness of AI-generated videos leads to specific emotional responses, such as reduced empathy and diminished feelings of guilt, suggesting that AI lacks the depth and authenticity that usually enhance emotional engagement.

Behavioral Component towards AI

The behavioral component, or conative component, of attitudes influences individual behavior and intentions, particularly in consumer actions towards products or services (Solomon et al., 2016). Positive attitudes can lead to brand loyalty and repeated purchases, while negative attitudes may result in avoidance. Research by Tasgit et al. (2023) indicates that employees with positive intentions towards artificial intelligence (AI) view it as beneficial, enhancing their performance, whereas negative intentions lead to decreased performance and increased concerns about personal development. Pellas (2023) emphasizes the importance of AI training in education, showing that effective training improves students' attitudes and intentions towards AI technologies. Cao et al. (2021) explore managerial attitudes towards AI, finding that personal well-being concerns negatively impact intentions to adopt AI, while fears of skill loss and job displacement also discourage positive attitudes. Yue and Li (2023) reveal that consumers with positive expectations are more likely to use AI services, while those with negative expectations prefer AI-assisted services. In the legal field, Xu et al. (2022) note that while "legal use" does not directly affect acceptance of AI lawyers, it influences perceived ease of use and usefulness, with consumers favoring AI that collaborates with humans. Trust in AI is crucial for service usage (Jang, 2023). Kshetri et al. (2024) highlight that accessibility and ease of use are key to the adoption of Generative AI tools among marketers, with trialability and cost-effectiveness being significant factors.

Cognitive Component towards AI

The cognitive component of consumer behavior encompasses the beliefs and knowledge individuals hold about a product or service, which is essential for rational evaluation (Solomon et al., 2016). This component influences how consumers justify their feelings and behaviors towards products based on attributes and perceived value. Research by Schwesig et al. (2023) and Chen et al. (2022) indicates a positive correlation between perceived knowledge of AI and the willingness to adopt AI technologies. Schwesig et al. (2023) found that while confidence in understanding AI risks did not significantly affect adoption likelihood, individuals who viewed themselves as knowledgeable about AI were more inclined to embrace AI applications. Furthermore, both actual knowledge and confidence in AI knowledge were linked to a greater willingness to use AI technologies. Chen et al. (2022) noted that individuals in occupations with higher exposure to AI had more positive sentiments towards generative AI, suggesting that familiarity with AI's practical applications mitigated fears of technological displacement. Park and Woo (2022) and Shin (2021) emphasize the significance of cognitive factors in shaping user attitudes towards AI, noting that positive cognitive evaluations are essential for fostering favorable attitudes. Park and Woo (2022) specifically explore how personality traits like openness to experience and innovativeness in information technology affect these evaluations, allowing individuals to view AI's potential for functionality and social interaction more positively. Their findings indicate that such cognitive evaluations are vital for individuals to rationalize their feelings and behaviors towards AI.

The Ethical Dilemma of AI-Generated Video

The swift progression of artificial intelligence (AI) technologies has introduced disruptive improvements in multiple fields, including video creation. AI-generated videos, driven by deep learning and neural networks, have unveiled extraordinary creative opportunities while simultaneously provoking substantial ethical dilemmas. These problems pertain to matters of authenticity, misuse, privacy, accountability, and societal impact.

Authenticity and Disinformation

A significant ethical concern related to AI-generated videos is the capacity to distort reality and disseminate falsehoods. Deepfake technology, a branch of AI-generated video, facilitates the production of hyper-realistic yet faked videos. Westerlund's (2019) research indicates that deepfakes can be exploited to propagate false narratives, damage reputations, and erode trust in media. The capacity to effortlessly modify visual content prompts inquiries regarding authenticity and the degradation of truth in public discourse (Fallis, 2020). AI-generated videos have been utilized to imitate public personalities, fabricating events that never transpired, thereby misleading audiences and jeopardizing democratic institutions.

Infringements of Privacy

AI-generated videos present considerable risks to personal privacy. The technology usually depends on databases comprising personal photographs and videos, often acquired without consent (Chesney & Citron, 2019). The illicit utilization of such data to produce deepfakes violates individuals' rights to privacy and autonomy. Deepfake pornography represents a significant infringement of privacy, mainly affecting women and inflicting psychological damage (Franks & Waldman, 2021). The absence of explicit laws regarding personal data utilization in AI video generation intensifies these ethical issues.

Accountability and Regulation

The ethical quandary of AI-generated videos is exacerbated by difficulties in establishing accountability. When AI systems independently generate movies, attributing blame for adverse consequences becomes challenging (Floridi et al., 2018). For example, if a deepfake video provokes violence or disseminates defamatory material, it is ambiguous whether responsibility rests with the AI developer, the video author, or the distributing platform. Existing legal frameworks frequently lack the capacity to tackle these difficulties, resulting in a regulatory void that enables nefarious individuals to use the technology (Schwarz, 2020).

Impact on Society and Trust

AI-generated videos erode public confidence in media and visual evidence, historically viewed as trustworthy documentation. Diakopoulos and Johnson (2021) assert that the rising ubiquity of deepfake videos has resulted in a phenomena termed the "liar's dividend," wherein authentic material may be disregarded as counterfeit, while falsified movies might be accepted as genuine. The erosion of trust has significant ramifications, affecting judicial proceedings and journalistic integrity, since visual evidence loses credibility.

Ethical Utilization in Creative Sectors

Although AI-generated movies has significant applications in entertainment, marketing, and education, their ethical utilization continues to be a contentious matter. Artists and content creators have raised apprehensions over intellectual property rights and the commercialization of creativity (McCosker & Wilken, 2020). The utilization of AI to reproduce the images of departed performers

or to generate hyper-realistic animations prompts inquiries over consent and the ethical limits of creative expression.

Alleviating Ethical Risks

A number of experts support the establishment of ethical principles and regulatory frameworks to tackle the difficulties presented by AI-generated videos. Jobin et al. (2019) assert that fostering transparency in AI development and guaranteeing the traceability of AI-generated material are crucial measures for alleviating ethical problems. Moreover, public awareness initiatives and the creation of detection technologies can enable individuals to critically assess visual media and distinguish genuine content from counterfeit stuff.

Conclusion

The examination of artificial intelligence (AI) concerning consumer behavior and its applications across diverse sectors has attracted heightened interest in recent years. The swift progression of technology has significantly transformed various sectors, including marketing, education, media, and entertainment, through the widespread impact of AI. The advent of AI-generated content, especially in video, art, and music, has transformed consumer interactions and emotional connections. This study has demonstrated that AI-generated material possesses a distinctive capacity to provoke emotional responses, hence affecting customer perceptions, attitudes, and behaviors. This research reveals that customer perceptions significantly influence the adoption of AI technologies. Numerous cognitive and emotional elements influence users' perceptions of AI-generated content. Trust in AI, knowledge of the technology, and individual personality qualities significantly impact consumer views towards AI-driven products and services. The capacity to customize content according to user preferences significantly increases the attractiveness of AI across multiple sectors. Nonetheless, although AI presents various advantages, apprehensions over its ethical ramifications, privacy concerns, and emotional effects on consumers have also been emphasized. AI technologies, especially deepfake videos and other generative tools, frequently encounter skepticism, eliciting apprehensions regarding their potential for abuse. Moreover, the research indicates that cultural circumstances significantly influence opinions regarding AI. In Western civilizations, the adoption of AI is frequently motivated by the convenience and innovation it provides; nevertheless, other cultures, especially in Asia, may exhibit distinct emotional reactions to AI-generated media. The research indicates that comprehending these cultural disparities is crucial for enterprises and engineers when deploying AI-driven services in international markets. The study highlights the increasing significance of emotional engagement in the consumption of AI-generated material. As AI-generated media becomes increasingly prevalent, its emotional impact on viewers is emerging as a crucial determinant of its success. The capacity of AI to elicit particular emotions, whether through art, videos, or customer service encounters, is a distinctive trait that corporations and marketers are increasingly utilizing. This emotional bond not only affects customer buying behavior but also molds wider cultural views on AI. Furthermore, the ethical dilemmas associated with AI, particularly its ability to emulate human behavior, pose significant inquiries regarding the future of human-AI cooperation. As AI advances, the distinction between human-generated and AI-generated work will likely become indistinct, challenging conventional concepts of creativity, authorship, and ownership. The prospect of AI substituting or augmenting human positions in creative sectors exacerbates these ethical discussions, particularly regarding the emotional ramifications of such transformations on both creators and consumers. In conclusion, although AI has significant potential for improving customer experiences, stimulating innovation, and promoting creativity, its implementation requires meticulous attention to the ethical, emotional, and cultural considerations involved. The

equilibrium between technological advancement and consumer confidence will eventually dictate the course of AI in society. As AI increasingly integrates into daily life, it is essential for stakeholders in both public and private sectors to maintain continuous discourse regarding the appropriate utilization of AI, optimizing its advantages while minimizing potential risks. The research emphasizes that as AI-generated content increasingly influences the media landscape, comprehending its emotional ramifications and ethical implications will be crucial for directing its future evolution and incorporation into society.

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