

Artificial Intelligence in Marketing Communication: Adoption Challenges and Opportunities Through a Lens of Cognitive Dissonance

Melanie B. Richards
East Tennessee State University

As artificial intelligence (AI) becomes increasingly prevalent, humans and organizations must make decisions regarding its adoption and use. However, the adoption of AI can be a complex process that challenges existing beliefs and practices. Cognitive dissonance, the discomfort that arises when individuals are faced with conflicting beliefs or behaviors, can exist within both the individual and organizational AI adoption journey. This article explores the concept of cognitive dissonance in relation to the adoption and use of AI, particularly when users may not even be aware that they are interacting with AI. By understanding the role of cognitive dissonance in the adoption process, individuals and organizations can make informed decisions that promote its successful integration and potentially lead to greater acceptance of its capabilities.

Keywords: Artificial Intelligence, AI, cognitive dissonance, technology adoption

INTRODUCTION

In marketing, strategic use of artificial intelligence (AI) has the potential to improve customer experience and related organizational outcomes, but few organizations have maximized its value (Lemon & Verhoef, 2016; Schwab & Davis, 2018; Verma et al., 2021). Though consumers generally accept AI when it serves their goals, fear and hesitations in personal adoption also persist (Pelau et al., 2021; Tyson & Kikuchi, 2023). Thus, there is a dichotomy between AI capabilities advancement in marketing and adoption challenges (Marinchak et al., 2018). In this conceptual discussion, these challenges will be briefly examined and the theory of cognitive dissonance applied to better understand how organizations may better navigate AI anxiety and adoption.

BACKGROUND

AI and Customer Experience

In a diversified media landscape, brands must deliver experiences that are simple, personalized, and contextualized (Edelman & Singer, 2015; Siebert et al., 2020). AI can support personalization via analytically-driven dynamic content optimization and marketing decision support (Ameen et al., 2021; Morgan, 2018; Overgoor et al., 2019). Customers also see process simplification, time-savings, and personalization benefits when interacting with AI-enabled assistants and chatbots (Liu-Thompkins et al., 2022; Mohannad & Smoudy, 2019; Morgan, 2018; Sidaoui et al., 2020). AI-connected developments including the Internet of Things (IoT), virtual reality (VR), and augmented reality (AR) also hold promise

in improving customer experiences with brands (Hoyer et al., 2020). In addition to business-to-consumer (B2C) benefits, sales teams may also see improved results when using AI within business-to-business (B2B) contexts (Hall et al., 2022). Thus, multiple opportunities exist for AI to optimize customer experiences and help achieve business goals.

Organizations and AI Adoption Challenges

Though AI diffusion has increased in recent years, not all organizations have adopted AI at an equal pace (Qureshi & Woo, 2022). Ethical concerns persist and adoption is dependent on evaluation of technical competencies, the organization's strategic AI road map, top management support, and digital maturity (Radhakrishnan & Chattopadhyay, 2020; Vlačić et al., 2021). At a functional level, information technology teams struggle to structure in ways that meet consumer expectations of AI, where a brand must be both personally relevant and consistent in experience across channels, but also respect consumer expectations of data usage related to information privacy and security.

Deloitte (2022) addresses this structural challenge in their recent Tech Trends report:

IT teams need a constitutional commitment to exploration; otherwise, all their resources will default toward operations. They should firewall and dedicate 5 to 10% of their workforce to pure exploration of what's next, and another 15 to 20% to iterative implementation of the most promising innovation candidates.

Many businesses cannot afford to reallocate 20-30% of their current IT operations group to organizational technology advancement, and yet, from a competitive perspective, they also can't afford not to invest in AI innovation. Resource allocation for AI advancement in an organization must also occur beyond IT, with marketing and other functional resources dedicated to AI innovation and implementation to enable overall success.

Consumers and AI Adoption Concerns

Organizations are not alone in AI adoption challenges. Throughout the past century, AI has been both feared and revered within cultural discourse. Vastly popular film franchises including Terminator and The Matrix have portrayed AI as a concern, especially with regard to the extent that AI, through unrestricted machine learning, could be capable of independent, malicious thought. In these scenarios, destructive outcomes play out when AI hypothetically turns against its creators. These fictional stories are deeply embedded cultural references informing both societal knowledge and understanding of AI.

Though apocalyptic AI screenplays are fictional, the effects of AI anxiety are real. Personal AI anxiety regarding the stability and capabilities of AI (including potential displacement of a human workforce) can present barriers to individual adoption (Bentley, 2018; Johnson & Verdicchio, 2017; Tyson & Kikuchi, 2023). Other reasons for consumer concern can include degraded or uncomfortable experiences, loss of privacy, invasiveness, and lack of human contact (Shank et al., 2019; Zenezini et al., 2016). Brands that don't meet consumer expectations of ethical AI usage can experience severe effects from both decreased brand perception and immediate financial impact (Deloitte, 2022; Lwin et al., 2016).

As a prominent example of how damaging misuse implications can be, Facebook (now Meta) incurred a 5-billion-dollar penalty from the Federal Trade Commission in 2019 for not appropriately protecting consumer privacy and data security and exposing its users to a serious risk of harm (FTC, 2019). Thus, even the most prolific digitally-based organizations face challenges balancing the goals and expectations customers have around personalization, the business goals the organization has for revenue, and concurrent customer expectations of data privacy and security. In this balance, companies must always ensure that the advantages of artificial intelligence usage surpass the risks to both consumers and the organization.

Cognitive Dissonance and AI Adoption

Even as consumers increasingly express AI usage concerns, many still utilize AI daily (Tyson & Kikuchi, 2023). This balance of active concern with routine use is reflected in the theory of cognitive dissonance, which has only recently been studied as a technology adoption factor (Levin et al., 2013; Marikyan et al., 2020). Cognitive dissonance occurs when a person has at least two inconsistent beliefs and/or actions. This creates discomfort, which they will seek to resolve by either creating an explanation that allows inconsistency to exist or by rejecting new, conflicting information (Festinger, 1957, 1964).

DISCUSSION

Cognitive Dissonance in the AI Adoption Journey: Organizations and Individuals

Research supports that cognitive dissonance is increased in human-robot interactions as compared to human-human interactions, and it is expected that humans work to mitigate dissonance when interacting with AI using typical resolution strategies (Levin et al., 2013). Table 1 provides examples of how cognitive dissonance may occur and how organizations and individuals could hypothetically work to resolve discomfort within the process of AI adoption.

TABLE 1
COGNITIVE DISSONANCE WITHIN ARTIFICIAL INTELLIGENCE ADOPTION

ORGANIZATIONS AND AI ADOPTION			
Concerns/Adoption Barriers	Goals	Explanation allowing barrier/goal inconsistency to exist (unresolved)	Rejection of new information
<ul style="list-style-type: none"> - Missing technical competencies - The organization's AI roadmap isn't supportive - Lack of top management support - The organization's digital maturity is low - Lack of resources 	<ul style="list-style-type: none"> - Improving customer experience - Optimizing marketing performance - Increasing revenue - Decreasing costs 	<p>The organization states the importance of innovation, but then focuses on selective aspects of innovation that don't include AI.</p>	<p>Senior management supports AI innovation plans for marketing, but IT leadership doesn't reallocate resources to support these plans and instead stays focused on current operational needs.</p>

INDIVIDUALS AND AI ADOPTION			
Concerns/Adoption Barriers	Goals	Explanation allowing barrier/goal inconsistency to exist (unresolved)	Rejection of new information
<ul style="list-style-type: none"> - Loss of privacy - Personal data misuse 	<ul style="list-style-type: none"> - Personalization - Simplification - Improved customer experience 	<i>The company isn't using any sensitive information to personalize my experience that would be concerning to me.</i>	<i>The brand probably delivers a similar experience to everyone.</i>
<ul style="list-style-type: none"> - Human workforce displacement 	<ul style="list-style-type: none"> - Personalization - Simplification - Improved customer experience 	<i>Whatever AI does, it's likely work people don't want to do or aren't capable of doing anyway.</i>	<i>Real people are still doing most of the work. AI doesn't make much of an impact.</i>

CONCLUSIONS AND IMPLICATIONS FOR THEORY AND PRACTICE

The theory of cognitive dissonance holds potential when evaluating scenarios related to AI adoption at both an individual and organizational level. Researchers should further investigate the processes in play for dissonance mitigation and resolution, which could evolve the theoretical understanding of AI adoption.

These processes, if better understood, may also inform practical development of marketing communication strategies and tactics that help to negotiate and resolve dissonance at an individual level. Acknowledgment of dissonance is also a first step for dissonance resolution and AI adoption at an organizational level. Combined, these actions have the potential to improve the customer's experience and improve desired organizational outcomes.

REFERENCES

- Ameen, N., Tarhini, A., Reppel, A., & Anand, A. (2021). Customer experiences in the age of artificial intelligence. *Computers in Human Behavior, 114*, 106548. <https://doi.org/10.1016/j.chb.2020.106548>
- Bentley, P. (2018). The three laws of artificial intelligence: Dispelling common myths. *Should We Fear Artificial Intelligence*, pp. 6–12.
- Deloitte. (2022). *Tech Trends 2022*. Retrieved from <https://www2.deloitte.com/us/en/insights/focus/tech-trends/2022.html>
- Edelman, D., & Singer, M. (2015). Competing on customer journeys. *Harvard Business Review, 93*(11), 88–100.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford University Press.
- Festinger, L. (1964). *Conflict, decision, and dissonance*. Stanford University Press.
- FTC. (2019). *Facebook to pay \$5 billion penalty for deceiving users about their ability to control privacy settings and facial recognition*. Retrieved from <https://www.ftc.gov/news-events/news/press-releases/2019/07/ftc-imposes-5-billion-penalty-sweeping-new-privacy-restrictions-facebook>
- Hall, K.R., Harrison, D.E., Ajjan, H., & Marshall, G.W. (2022). Understanding salesperson intention to use AI feedback and its influence on business-to-business sales outcomes. *Journal of Business & Industrial Marketing, 37*(9), 1787–1801.

- Hoyer, W.D., Kroschke, M., Schmitt, B., Kraume, K., & Shankar, V. (2020). Transforming the customer experience through new technologies. *Journal of Interactive Marketing*, 51(1), 57–71.
- Johnson, D.G., & Verdicchio, M. (2017). Reframing AI discourse. *Minds and Machines*, 27, 575–590.
- Lemon, K., & Verhoef, P. (2016). Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing*, 80(6), 69–96. doi: 10.1509/jm.15.0420
- Levin, D.T., Harriott, C., Paul, N.A., Zhang, T., & Adams, J.A. (2013). Cognitive dissonance as a measure of reactions to human-robot interaction. *Journal of Human-Robot Interaction*, 2(3), 3–17.
- Liu-Thompkins, Y., Okazaki, S., & Li, H. (2022). Artificial empathy in marketing interactions: Bridging the human-AI gap in affective and social customer experience. *Journal of the Academy of Marketing Science*, 50(6), 1198–1218.
- Lwin, M. O., Wirtz, J., & Stanaland, A. J. S. (2016). The privacy dyad. *Internet Research*, 26(4), 919–941. <http://dx.doi.org/10.1108/IntR-05-2014-0134>
- Marikyan, D., Papagiannidis, S., & Alamanos, E. (2020). Cognitive Dissonance in Technology Adoption: A Study of Smart Home Users. *Inf Syst Front*. <https://doi.org/10.1007/s10796-020-10042-3>
- Marinchak, C.M., Forrest, E., & Hoanca, B. (2018). Artificial intelligence: Redefining marketing management and the customer experience. *International Journal of E-Entrepreneurship and Innovation (IJEEI)*, 8(2), 14–24.
- Mohannad, A.M.A., & Smoudy, A.K.A. (2019). The role of artificial intelligence on enhancing customer experience. *International Review of Management and Marketing*, 9(4), 22–31.
- Morgan, B. (2018). *3 Use Cases of Artificial Intelligence for Customer Experience*. Forbes. Retrieved from <https://www.forbes.com/sites/blakemorgan/2018/08/01/3-use-cases-of-artificial-intelligence-for-customer-experience/#1f084b6e5e34>.
- Overgoor, G., Chica, M., Rand, W., & Weishampel, A. (2019). Letting the Computers Take Over: Using AI to Solve Marketing Problems. *California Management Review*, 61(4), 156–185. <https://doi.org/10.1177/0008125619859318>
- Pelau, C., Ene, I., & Pop, M. (2021). The Impact of Artificial Intelligence on Consumers' Identity and Human Skills. *Amfiteatru Economic*, 23(56), 33–45. <http://dx.doi.org/10.24818/EA/2021/56/33>
- Qureshi, Z., & Woo, C. (Eds.). (2022). *Shifting Paradigms: Growth, Finance, Jobs, and Inequality in the Digital Economy*. Brookings Institution Press. Retrieved from <http://www.jstor.org/stable/10.7864/j.ctv13xpqtd>
- Radhakrishnan, J., & Chattopadhyay, M. (2020). Determinants and Barriers of Artificial Intelligence Adoption - A Literature Review. *Re-imagining Diffusion and Adoption of Information Technology and Systems: A Continuing Conversation*, pp. 89–99. https://doi.org/10.1007/978-3-030-64849-7_9
- Schwab, K., & Davis, N. (2018). *Shaping the future of the fourth industrial revolution*. Currency.
- Shank, D.B., Graves, C., Gott, A., Gamez, P., & Rodriguez, S. (2019). Feeling our way to machine minds: People's emotions when perceiving mind in artificial intelligence. *Computers in Human Behavior*, 98, 256–266. <https://doi.org/10.1016/j.chb.2019.04.001>
- Sidaoui, K., Jaakkola, M., & Burton, J. (2020). AI feel you: Customer experience assessment via chatbot interviews. *Journal of Service Management*, 31(4), 745–766. <https://doi.org/10.1108/josm-11-2019-0341>
- Siebert, A., Gopaldas, A., Lindridge, A., & Simões, C. (2020). Customer Experience Journeys: Loyalty Loops Versus Involvement Spirals. *Journal of Marketing*, 84(4), 45–66. <https://doi.org/10.1177/0022242920920262>
- Tyson, A., & Kikuchi, E. (2023). *Growing public concern about the role of artificial intelligence in daily life*. Pew Research Center. Retrieved from <https://www.pewresearch.org/short-reads/2023/08/28/growing-public-concern-about-the-role-of-artificial-intelligence-in-daily-life/>
- Verma, S., Sharma, R., Deb, S., & Maitra, D. (2021). Artificial intelligence in marketing: Systematic review and future research direction. *International Journal of Information Management Data Insights*, 1(1), 100002.

- Vlačić, B., Corbo, L., e Silva, S.C., & Dabić, M. (2021). The evolving role of artificial intelligence in marketing: A review and research agenda. *Journal of Business Research*, 128, 187–203.
- Zenezini, G., & Ghajargar, M., & Fiore, E., & De Marco, A. (2016). *The Smart Home Services Diffusion Process: A System Dynamics Model*.