

May (A)I help? Consumers' Acceptance of AI-based Expert Services in a High Touch Context

Marie-Louise Glas
SRH Mobile University

Anna Rottenkolber
Dr. Grandel GmbH

Gabriel Duttler
Dr. Grandel GmbH

Frank Danzinger

Augsburg Technical University of Applied Sciences

Cite as:

Glas Marie-Louise, Rottenkolber Anna, Duttler Gabriel, Danzinger Frank (2024), May (A)I help? Consumers' Acceptance of AI-based Expert Services in a High Touch Context. *Proceedings of the European Marketing Academy*, 52nd, (118218)

Paper from the 53rd Annual EMAC Conference, Bucharest, Romania, May 28-31, 2024



May (A)I help?
Consumers' Acceptance of AI-based Expert Services
in a High Touch Context

Abstract:

This article examines the integration of AI-based expert services (AIES) in high-touch industries where human interaction is essential. It highlights the shift from product-centric to personalized experiences, emphasizing AI's role in enhancing these. Semi-structured interviews based on prototype testing were conducted in a beauty industry context. The study enhances traditional and AI acceptance models by acknowledging the co-creative nature of AIES, the pivotal role of personalization as a design element, as well as the trust/risk evaluation during a primary appraisal stage. Findings also suggest the prominence of perceived convenience over effort expectancy in a secondary appraisal stage. Based on the findings, an adapted AIDUA is presented. The study underscores the need for personalization and efficient, engaging AI services, while acknowledging limitations like reliance on personal judgment. It offers managerial implications for AI design and proposes future research directions.

Keywords:

AI services, Acceptance, high-touch

Track:

Service Marketing and Service Innovation

1. Introduction

In today's hyper-competitive business landscape, outstanding customer experience has emerged as a linchpin for sustained success. The pursuit of individuality by consumers underscores the pivotal role of exceptional customer experiences in capturing and retaining their attention and loyalty. Brands worldwide have adapted to this trend, shifting focus from product distribution to personalized services and customer solutions (Lubkowitz, 2019). This transformation enhances economic value by elevating goods into services, services into experiences, and experiences into life-altering transformations and “pure” value-in-use (Pine & Gilmore, 2013; Vargo & Lusch, 2017). However, this path is resource-intensive and requires a deep understanding of individual needs to create value for both, customer and providing business. Kotler (1989) has already pointed out that customization is at its core “an analytical act that precedes the development of strategies” (p. 11). Consequently, the developments in analytics and customization technologies in the last two decades have given way to a range of strategies such as mass customization (Fogliatto et al., 2012), open innovation (West et al., 2014), and co-creation (Galvagno & Dalli, 2014). With the rise of Artificial Intelligence (AI), a new wave of technologies is emerging to take customer experience to a new level (Daqar & Smoudy, 2019; Gursoy et al., 2019). AI's ability to detect patterns and connect insights streamlines the customization and service delivery process, enabling automated "conversational commerce" (Puntoni et al., 2021). AI may also enhance physical experiences by supporting human experts with data-driven recommendations (Pantano & Di Pietro, 2012). Consequently, retailers have embraced AI to create tailored experiences like chatbots that help to solve problems, virtual try-on solutions in fashion, or personalized recommendation services to find one's customized skincare routine (Ameen et al., 2021; Gursoy et al., 2019; Morgan, 2019). While these AI applications provide valuable support and guidance throughout many retail fields, technological advancements have proven to be more difficult for products and services with high personal involvement and/or symbolic value (Yalcin & Puntoni, 2023). So called high-touch industries - such as healthcare, luxury, or the beauty industry - are characterized by intensive customer service and personalized interactions, where personal touch is intrinsic to the quality of the experience. Despite AI's capacity to enrich customer experiences (Ameen et al., 2021; Daqar & Smoudy, 2019; Pantano & Di Pietro, 2012; Trawnih et al., 2022) comprehending consumer receptivity to AI in these high-touch environments remains critical and underexplored (Ameen et al., 2021; Gursoy et al., 2019; Kelly et al., 2023; Trawnih et al., 2022). This paper addresses this gap and delves into

the application of AI-based expert services (AIES) within the beauty industry, aiming to delineate the determinants of consumer acceptance in a high-touch context.

2. Conceptual background

Technology and AI acceptance: Technology acceptance is a well-explored domain, with the Technology Acceptance Model (TAM) proposed by Davis (1987) being a foundational framework positing perceived ease of use and usefulness as critical to technology adoption. TAM has been applied across diverse settings, augmented with variables like user traits and perceptions of technology's attributes—risk, cost, and security—and social and hedonic values (Kelly et al., 2023; Pantano & Di Pietro, 2012). The Unified Theory of Acceptance and Use of Technology (UTAUT) as proposed by Venkatesh (2003) puts a stronger focus on organizational contexts, emphasizing performance and effort expectancy, alongside social influence and facilitating conditions, as adoption determinants (Sohn & Kwon, 2020). While these models have robust predictive capabilities, they fall short in explaining AI acceptance (Scheuer, 2020; Gursoy et al., 2019; Kelly et al., 2023; Sohn and Kwon, 2020), as AI operates with autonomy, ready-to-use without requiring user competency in technology. This has prompted new AI-specific acceptance models, like the AIDUA model (Gursoy et al., 2019), which adapts UTAUT's constructs to the AI context. AIDUA suggests that in AI device use, effort is not about learning technology but the interaction with/appraisal stages of AI. Performance expectancy is framed around AI service quality compared to human-delivered service. AIDUA's core constructs—effort and performance expectancy—are influenced by anthropomorphism, depicting AI with human-like characteristics. In addition, social influences, including peer and societal norms as well as hedonic motivation, describing the entertainment value from technology, influence the core constructs of the model. While Gursoy et al. (2019) found evidence supporting the AIDUA model, they were unable to fully explain the variability in effort expectancy. In addition, despite Gursoy et al. (2019) suggesting a positive correlation with anthropomorphism, Yalcin and Puntoni (2023) have reported negative effects as well, leading to an ambiguous understanding of this construct's role. Moreover, we assert the necessity of exploring additional determinants of AIES acceptance, particularly in high-touch settings where human interaction in service delivery is essential and where adoption of technology thus remains challenging (Yalcin & Puntoni, 2023).

AI and high-touch service: AI presents the unique advantage of efficiently collecting and analyzing data at scale to classify consumer needs and make recommendations based on this classification. Accordingly, the level of personalization has repeatedly been pointed out

as a pivotal element for AI-enabled services (Ameen et al., 2021; Trawnih et al., 2022). According to Ameen et al. (2021) customers, driven by hedonistic motives, may even accept certain sacrifices for the sake of personalization and/or better tailored products and services. We contend that personalization in AI extends beyond tailoring services to individual customer needs; it also involves promoting interaction and co-creation, enabling consumers to actively influence AI decisions and co-create service outcomes. Indeed, especially symbolic goods and complex services have always been subject to co-creation as the bi-directional exchange of user/domain knowledge and technical/product knowledge as well as mutual understanding always have been pivotal for successful services and experiences. Consequently, AI-based customization needs to check for and seamlessly adapt to prior knowledge and/or individual properties of the user in order to generate positive co-creation effects. Thus, aspects like customer participation behavior (e.g. seeking behavior and willingness to share) as well as customer citizenship behavior (e.g. tolerance or willingness to help the firm) are important factors for satisfaction with the co-creation process (Frasquet-Deltoro et al., 2019). However, AI should not just be considered another technological means to do “more” or “better” co-creation as we find indications that the nature of the interaction and actors is changing through AI deployment (e.g. Yalcin & Puntoni, 2023). The co-creation concept provides an insight into expectations of the user in conversational/co-creative situations, particularly in contexts where uniqueness holds more value than conformity. At the same time, it reveals process-based risks for AI-acceptance. For example, the research of Puntoni et al. (2021) demonstrates that patients using AI devices in medical contexts may hesitate to embrace medical AI due to concerns that it cannot fully account for their unique characteristics and circumstances, unlike human doctors. To address this, consumers seek reassurance and confirmation, often desiring the ability to validate or modify AI decisions (Puntoni et al., 2021). Interaction and co-production activities of customers mitigate the risk of consumers feeling misclassified and misunderstood. Whereas personalization highlights the process and the outcome of AI deployment, the nature of the interaction and the relationship with AI also seem to impact the perceptions of AI-enabled services (Kelly et al., 2023; Scheuer, 2020). Trust, a multifaceted construct, extends to the AI as a technology, the service provider and the AI usage process (Ameen et al., 2021). Scheuer (2020) highlights trust as crucial for AI acceptance, built by the AIs reliability, traceability and transparency. Perceived risk encompasses monetary but also non-monetary “costs” like time investment, effort or emotionally negative experiences (Ameen et al., 2021). In AI service delivery this might particularly regard concerns about loss of control and privacy. We draw from the literature

that along with the constructs of the AIDUA, trust and perceived risk need to be acknowledged when studying AIES acceptance. Furthermore, due to the nature of high-touch offerings, demanding a high level of individualization, attention and reassurance, we see the level of personalization and the design of interaction and co-creation as crucial determinants.

3. Method

To gain a deeper understanding of consumer thoughts, in-depth semi-structured interviews were conducted in a laboratory setting, featuring a prototype test for a well-known skincare brand. This approach enabled (1) a specific AI interaction without prior training, (2) the inclusion of non-users, and (3) a prototype/interview method guiding but not confining participants' imaginations to a pre-designed service. Ten female participants aged 24 to 59 were studied, all of whom showed an affinity for beauty products. The sample matched the brand's target group and participants were incentivized with vouchers totaling €50. All tests and interviews were conducted in person/via Zoom, recorded and transcribed. The duration of ranged from 28 to 55 minutes. In the interview's first part, participants discussed their general skin-care behaviors, purchasing processes, and the role of skincare products in their daily lives. Questions also probed their knowledge of technology, focusing on AI, and their attitudes toward data protection. Subsequently, prototype testing was conducted. Participants interacted with a clickable prototype on the brand's website, simulating the AIES process. This service aimed to offer skin analysis and personalized skincare product recommendations by analyzing facial images. In line with the co-creation concept, test subjects were guided step-by-step through the skin analysis process, with individual paths permitted. The interviewer intervened only when necessary, mainly observing user behavior. Following the prototype testing, participants answered standardized questions about their experience and attitudes towards the AIES' core concept. Evaluation of the interviews was conducted through a structured content analysis, based on Mayring and Brunner (2009). MAXQDA supported the research analysis, utilizing hybrid category formation and coding.

4. Results and proposed model

Guidance wanted: All participants stated that finding the right skincare is important, as it is crucial in one's daily beauty routine and requires a high need of explanation. However, variety in the cosmetic market is huge and prices (=costs of wrong decisions) are often high. Thus, guidance and consultation are demanded by all interviewees.

A matter of trust: Only 50% of the participants stated they would seek consultation in physical stores, where products can be tested right away. The rest would follow recommendations by friends and family or even completely deny personal recommendations, as they believe they best know what is best. Across all responses, trust in the expertise and perceived neutrality of the recommendation source, AI as well as human, was deemed essential.

Intention to Use: All were positive with about 40% even expressing a definite intention to use AIES, citing reasons such as convenience and aid in decision-making. This positive response was observed across segments, including those who usually prefer in-store assistance and those who rely more on online resources or personal recommendations.

Our findings suggest several adaptations to the AIDUA. First of all, we argue that the “primary appraisal” phase as proposed by Gursoy et al. (2019) should rather be considered as “individual and service properties” including the degree of personalization of the service and with hedonic motivation showing a general attitude towards beauty/fashion. We found indications that those properties lead to an initial trust/risk evaluation (primary appraisal) that includes the perceived risk of AI-usage and influences the perceived convenience and performance expectancy (secondary appraisal). Our findings did not allow to check for anthropomorphism; however, we consider this technological property an antecedent with more elaborated prototypes.

Individual and Service Properties: Social influence became as apparent most participants stated they would rely on recommendations by friends, family, beauticians or in some cases even influencers on social media. Also, hedonic motivation appeared to influence the intention to use, as it arouses curiosity to interact with a new technology, getting to know one's skin needs better quickly and easily. Some even stated it was “fun”. All interviewees share the opinion that every skin is unique and needs its individual care routine. The AIES largely lives up to this urge for personalization, even though only one person felt that she had received fully individualized advice. Above all, the co-creation approach, in which the interviewees themselves were allowed to co-decide the counselling process through choices, increased the feeling of having been individually advised. This shows that providing the opportunity to influence the decision-making process, by leaving options or by asking reassuring questions, a lack of trust in the capability to capture specific needs will be reduced. One participant stated: *“It would be nice to be able to contact someone if there are questions or if you are unsure about something”*. Hence, including some form of human interaction or at least the option to contact a human expert to continue the interaction, will most likely add profound additional value to the service and lead to a complete individualized experience.

Primary Appraisal: Almost all participants expressed concern about the technical capability, showing a lack of trust in the AI and its outcome quality. Only about 20% totally trust in the capability of the AIES. The rest questioned whether the AI could rely on just three pictures taken by a smartphone, being heavily dependent on lightening. Thus, as found in previous research, trust in the capability of the AI is likely to be a strong direct determinant of performance expectancy. Giving reassurance in the sense that the AIES confirms the quality of the lightning or picture itself and being transparent on how the service works, would help reduce this fear. In addition, trust-building factors such as the involvement of human experts like dermatologists, in the development of the AIES can build trust in the technological performance capability. We could also see a perception of risk with some of the participants, mainly concerning privacy issues regarding the picture taken. One participant stated: *“It says that data will be deleted directly after, but I don’t really trust that”*. Perceived risk seems to be strongly connected to trust in the AI and most likely will be influenced by the level of overall trust. Our findings suggest that perceived risk such as privacy issues has a direct negative impact on intention to use. In general, we find indications that even before usage, participants evaluate an expected trust/risk ratio in a primary appraisal.

Secondary Appraisal: As suggested in AIDUA, the costs and benefits are weighed against each other during the secondary appraisal stage, leading to the acceptance/rejection of the service. The model presented here relies on performance expectancy and perceived convenience instead of effort expectancy as influencers of intention to use. Regarding performance expectancy all individuals showed an initial high interest in the outcome of the AIES reflected in statements like: *“It was interesting to see how an AI would assess my skin”*. Also, the fact that the AIES delivered comprehensive information on the individual’s skin followed by concrete product recommendations was found to be of great advantage. **Effort versus Convenience:** The interviewees stated they appreciate learning more about their skin and the most effective treatment options, in an easy and convenient way. Actually, none of the participants perceived using the AIES as an effort. In fact, quite the opposite; it was stated to be intuitive, easy to use and convenient, even more than seeking consultation by a human due to the independency of time and place. *“Very useful indeed. Because (..) I don’t have to go and see a beautician and still receive guidance.”* While it depends where and how an AIES is offered, statements like these clearly show that using the system is not perceived as an effort, leading us to rather integrate the positive determinant “perceived convenience”. Even the need to upload a picture and answer questions, was not perceived as an effort, as long as people

understand the sense of it (transparency). We thus argue that performance expectancy has a direct impact on convenience. Figure 1 summarizes our findings in an adapted AIDUA.

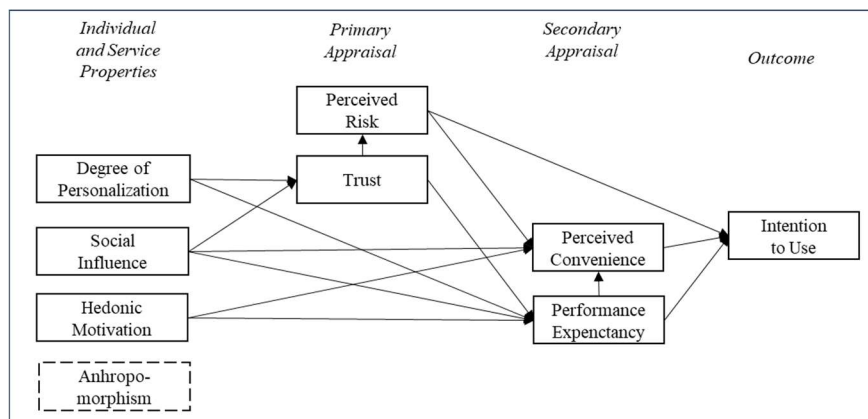


Figure 1: Adapted AIDUA model based on findings

5. Conclusion

This study significantly enhances the understanding of AIES acceptance in high-touch industries. By presenting an adapted AIDUA model, it underscores the co-creative nature of AIES, pivotal role of personalization as a design element and the trust/risk evaluation during the primary appraisal phase. Furthermore, findings suggest the prominence of perceived convenience over effort expectancy as key determinant alongside performance expectancy in the secondary appraisal phase. This shift reflects AI's role in facilitating processes and increasing convenience by automating certain tasks, making the traditional notion of effort expectancy less relevant. An additional contribution pertains ready-to-use AI tools such as chatbots and GPT technologies. As these tools become more common in offering prompt and efficient customer services, the study provides valuable insights into optimizing them for high-touch industries. Shaping interaction, ensuring transparency to build trust and finding good balance between efficiency and the expected level of personalization and engagement is crucial in such sectors. Moreover, the research identifies a consumer segment less inclined to utilize AIES: Individuals who trusts their own judgment more than AI offerings, underscoring the limitations of AI in certain contexts. This study is limited by a small qualitative sample size and focus on a single prototype. Future research should aim to test the adapted AIDUA in larger, quantitative settings. Also, the role of anthropomorphism in this context remains unexplored, as the prototype used did not include human-like features and was perceived as software. Regarding the perceived lack of personal contact, future comparative studies should investigate whether a more humanly designed AI, such as an AI chatbot with a name and face, could bridge this gap. Finally, it's important to note that using AIES does not inherently lead

to adherence to the recommendations. While AI can guide and suggest, the final purchase decision lies with the consumer. This distinction is crucial, especially in contrast to human expert recommendations where social pressures may influence the buying decision. Interactions with AI, free from such pressures, offer consumers greater autonomy, underscoring AI's value as a non-obligatory advisory tool. In summary, this research not only broadens academic discussions on AIES but also provides valuable insights for businesses in high-touch industries. By emphasizing personalization, shaping co-creation, acknowledging AI adoption limitations among certain customer segments, and recognizing the autonomous nature of consumer decision-making in AI interactions, businesses can more effectively strategize AI integration. This approach aims to complement rather than replace the unique value of human interactions in service delivery, ensuring a synergistic blend of technology and personal touch that meets consumer expectations in high-touch environments.

References

- Ameen, N., Tarhini, A., Reppel, A., & Anand, A. (2021). Customer experiences in the age of artificial intelligence. *Computers in Human Behavior*, 114.
- Daqar, M. A. 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.
- Davis, F.D. (1989). Perceived Usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13, 319-340.
- Fogliatto, F. S., Da Silveira, G. J., & Borenstein, D. (2012). The mass customization decade: An updated review of the literature. *International Journal of Production Economics*, 138(1), 14–25.
- Frasquet-Deltoro, M., Alarcón-del-Amo, M.-C., & Lorenzo-Romero, C. (2019). Antecedents and consequences of virtual customer co-creation behaviours. *Internet Research*, 29(1), 218–244.
- Galvagno, M., & Dalli, D. (2014). Theory of value co-creation: a systematic literature review. *Managing Service Quality*, 24(6), 643–683.
- Gursoy, D., Chi, O. H., Lu, L., & Nunkoo, R. (2019). Consumers acceptance of artificially intelligent (AI) device use in service delivery. *International Journal of Information Management*, 49, 157–169.
- Kelly, S., Kaye, S.-A., & Oviedo-Trespalacios, O. (2023). What factors contribute to the acceptance of artificial intelligence? A systematic review. *Telematics and Informatics*, 77.

- Kotler, P. (1989). From mass marketing to mass customization. *Planning Review*, 17(5), 10–47.
- Lubkowitz, M. (2019). Service-Dominant Logic, https://www.msg.group/images/msggroup/services/techrefresh/2019-11-28_td_sdl.pdf
- Mayring, P., & Brunner, E. (2009). Qualitative Inhaltsanalyse. In R. Buber & H. H. Holzmüller (Eds.), *Qualitative Marktforschung* (pp. 669–680). Gabler.
- Morgan, B. (2019, March 4). The 20 Best Examples Of Using Artificial Intelligence For Retail Experiences. *Forbes*.
- Pantano, E., & Di Pietro, L. (2012). Understanding Consumer's Acceptance of Technology-Based Innovations in Retailing. *Journal of Technology Management & Innovation*, 7(4), 1–19.
- Pine, B. J., & Gilmore, J. H. (2013). The experience economy: past, present and future. In J. Sundbo & F. Sørensen (Eds.), *Handbook on the Experience Economy*. Edward Elgar Publishing.
- Puntoni, S., Reczek, R. W., Giesler, M., & Botti, S. (2021). Consumers and Artificial Intelligence: An Experiential Perspective. *Journal of Marketing*, 85(1), 131–151.
- Scheuer, D. (2020). *Akzeptanz von Künstlicher Intelligenz* [Acceptance of Artificial Intelligence]. Springer Fachmedien Wiesbaden. (in German)
- Sohn, K., & Kwon, O. (2020). Technology acceptance theories and factors influencing artificial Intelligence-based intelligent products. *Telematics and Informatics*, 47.
- Trawnih, A., Al-Masaeed, S., Alsoud, M., & Alkufahy, A. M. (2022). Understanding artificial intelligence experience: A customer perspective. *International Journal of Data and Network Science*, 6(4), 1471–1484.
- Vargo, S. L., & Lusch, R. F. (2017). Service-dominant logic 2025. *International Journal of Research in Marketing*, 34(1), 46–67.
- West, J., Salter, A., Vanhaverbeke, W., & Chesbrough, H. (2014). Open innovation: The next decade. *Research Policy*, 43(5), 805–811.
- Yalcin, G., & Puntoni, S. (2023). How AI affects our sense of self: And why it matters for business. *Harvard Business Review* (September-October), 130–136.