

AI concierge in the customer journey: what is it and how can it add value to the customer?

Stephanie Q. Liu

Department of Human Sciences, The Ohio State University, Columbus, Ohio, USA

Khadija Ali Vakeel

Department of Management and Entrepreneurship, Driehaus College of Business, DePaul University, Chicago, Illinois, USA

Nicholas A. Smith

Department of Psychology, Northern Illinois University, DeKalb, Illinois, USA

Roya Sadat Alavipour

White Lodging-J.W. Marriott, Jr. School of Hospitality and Tourism Management, Purdue University, West Lafayette, Indiana, USA

Chunhao(Victor) Wei

College of Tourism and Service Management, Nankai University, Tianjin, China, and

Jochen Wirtz

Department of Marketing, NUS Business School, National University of Singapore, Singapore

Abstract

Purpose – An AI concierge is a technologically advanced, intelligent and personalized assistant that is designated to an individual customer, proactively taking care of that customer's needs throughout the service journey. This article envisions the idea of AI concierges and discusses how to leverage AI concierges in the customer journey.

Design/methodology/approach – This article takes a conceptual approach and draws insights from literature in service management, marketing, psychology, human-computer interaction and ethics.

Findings – This article delineates the fundamental forms of AI concierges: dialog interface (no embodiment), virtual avatar (embodiment in the virtual world), holographic projection (projection in the physical world) and tangible service robot (embodiment in the physical world). Key attributes of AI concierges are the ability to exhibit semantic understanding of auditory and visual inputs, maintain an emotional connection with the customer, demonstrate proactivity in refining the customer's experience and ensure omnipresence through continuous availability in various forms to attend to service throughout the customer journey. Furthermore, the article explores the multifaceted roles that AI concierges can play across the pre-encounter, encounter and post-encounter stages of the customer journey and explores the opportunities and challenges associated with AI concierges.

Practical implications – This paper provides insights for professionals in hospitality, retail, travel, and healthcare on leveraging AI concierges to enhance the customer experience. By broadening AI concierge services, organizations can deliver personalized assistance and refined services across the entire customer journey.



Originality/value – This article is the first to introduce the concept of the AI concierge. It offers a novel perspective by defining AI concierges' fundamental forms, key attributes and exploring their diverse roles in the customer journey. Additionally, it lays out a research agenda aimed at further advancing this domain.

Keywords Artificial intelligence, AI, Concierge, Digital agent, Customer journey

Paper type Research paper

1. Introduction

Concierge services have a long history of being offered predominantly by luxury, high-end brands (e.g. Ritz-Carlton and American Express Platinum) targeting an affluent clientele that includes high-net-worth individuals, executives, VIPs and celebrities. The essence of the traditional concierge concept is an experienced assistant who arranges and manages tasks on behalf of a busy client, offering high personal attention, human touch, professionalism and convenience. While the traditional concierge is an exclusive service, an AI-infused concierge has the capability of being made available and accessible to a wide audience as its incremental costs are low. With the rapid growth of AI and its integration into virtually all service industries including hospitality, tourism, retail, healthcare and transportation (Huang and Rust, 2018; Loureiro *et al.*, 2021; Wirtz *et al.*, 2023a), an AI-infused concierge could become a common feature of many services and benefit not only customers but also service firms.

Derived from the traditional concierge concept, an AI concierge is a technologically advanced, intelligent and personalized assistant that is designated to an individual customer, proactively taking care of that customer's needs throughout the service journey. While prior research has explored pertinent concepts like conversational agents and service robots (Borghi *et al.*, 2023; Huang and Rust, 2021; Lu *et al.*, 2020; Mariani *et al.*, 2023), our article is the first to define an AI concierge and differentiate it from related concepts.

This article conceptualizes the idea of an AI concierge and discusses how to leverage AI concierges in the customer journey. Specifically, the goals of this article are to (1) detail what an AI concierge entails; (2) discuss the AI concierge's fundamental forms, attributes, and industry applications; (3) outline the roles of an AI concierge in the customer journey; (4) understand the opportunities and challenges of implementing AI concierges; and (5) develop an agenda for future research.

2. Introducing the concept of an AI concierge

2.1 Concierge requirements and challenges

To be successful, a concierge needs a diverse skill set: enthusiasm combined with organizational efficiency, a keen sensitivity to customer needs, multilingual capabilities to communicate effectively with a varied clientele, and discretion to ensure customer privacy and comfort. Additionally, a genuine, warm and friendly demeanor is crucial for nurturing positive interactions, representing the very soul of hospitality in the service sector (Bryson and Ziminski, 1992).

However, today's rapidly changing societal landscape presents challenges in sourcing individuals with this unique blend of skills and attributes. The younger workforce often gravitates towards tech-oriented jobs and entrepreneurial ventures, viewing them as more lucrative and meaningful (Guo and Ayoun, 2022). Additionally, while hospitality schools may teach the basics, the nuanced skills a concierge needs are often learned on the job and through life experience (e.g. exceptional interpersonal skills and cultural sensitivity), making them harder to cultivate and find. Moreover, as urban areas expand and global travel becomes more common, concierges face the challenge of not only understanding their city's evolving trends, but also having insights into the many national cultures, cuisines and preferences of their customers. Such heightened expectations create a demand for a particularly skilled and rare type of concierge. Amidst all these shifts, customers, equipped with easy access to

information (e.g. through the Internet, Google Maps and ChatGPT) and greater disposable income have further raised the bar, expecting nothing short of exceptional service, adding to the demands and pressures to the concierge's role (Loureiro *et al.*, 2021; Loureiro, 2022).

The rapidly advancing technological landscape, particularly with the emergence of generative AI (GenAI), presents innovative solutions to meet these escalating demands (Dwivedi *et al.*, 2023). Specifically, the integration of AI into concierge services offers a wealth of potential benefits that can surpass human limitations (Ivanov and Webster, 2017). For instance, the AI concierge's decision-making processes are informed by an extensive range of databases, it can process numerous requests simultaneously, functions 24/7 without breaks, and it upholds a consistently courteous demeanor, irrespective of the complexity of a customer's emotional state.

2.2 What is an AI concierge?

An AI concierge can be defined as a technologically advanced, intelligent and personalized assistant, inspired by the traditional concierge concept. It is designed to cater to a customer's psychological, emotional, and physical needs throughout their service journey, employing proactive measures to enhance their experience (Li *et al.*, 2022; Sumner and Quinn, 2017). However, the concept is often mistakenly equated with chatbots. An AI concierge differs from generic chatbots on three key aspects: First, an AI concierge serves as a dedicated entity that oversees the entire customer journey, ensuring that it is seamless and integrated from initiation to conclusion. In contrast, prior research on conversational agents and service robots often centers around the context of completing a specific task or transaction (e.g. making an inquiry or checking in). Second, an AI concierge adopts a relational, experience-centric approach. It utilizes advanced machine learning (ML) and algorithms to profile each customer's preferences and behaviors. This personalized strategy fosters a heightened level of attention and dedication, creating a sense of distinctiveness for the customer throughout their journey and nurturing brand loyalty. Third, unlike chatbots, which primarily provide information, an AI concierge excels in understanding and addressing customer emotions and needs. It proactively manages the customer experience and goes beyond transactions to delight customers and elevate their journey.

In the following section, we discuss the four fundamental forms of AI concierge, followed by the key attributes of AI concierges.

2.3 Fundamental forms of AI concierge

In the past few years, AI concierge services have undergone a remarkable transformation, expanding from the initial dialog interfaces to include a variety of advanced embodiments. Today, the key four forms of AI concierge are: dialog interface (no embodiment), virtual avatar (embodiment in the virtual world), holographic projection (projection in the physical world) and tangible service robot (embodiment in the physical world), visualized in Figure 1.

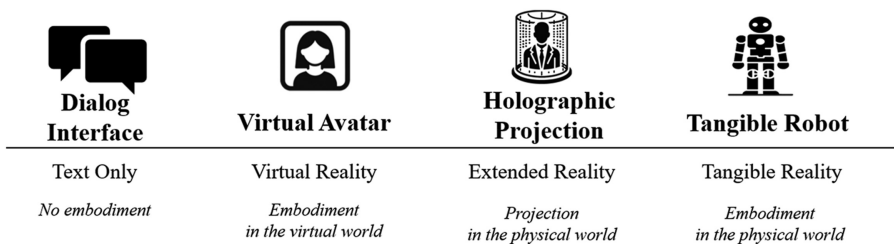


Figure 1.
AI concierge's fundamental forms

Source(s): Figure created by the authors

2.3.1 Dialog interface. An AI concierge with a dialog interface is designed to engage with customers through text or speech. It is the earliest and most widespread form of AI concierge. While it may have a designated name, this form of AI concierge lacks a physical or virtual embodiment, focusing solely on language-based communication. The dialog interface is particularly valuable in contexts where an embodied interface is impractical or where a customer's visual focus away from the concierge is crucial, such as when a customer is driving or cooking. In these situations, a non-embodied AI concierge provides efficient assistance without diverting the user's visual attention from their primary task.

2.3.2 Virtual avatar. The virtual avatar is an AI concierge enhanced by an avatar, integrating a digital embodiment into interactions with customers. More than just a name, this avatar, whether in 2- or 3-dimensional form, offers a vivid virtual persona, complete with unique attributes that elevate the user experience beyond simple voice or text exchanges. Specifically, the virtual avatar renders conversations more relatable and fosters deeper emotional connections (Wood and Schulman, 2019; Joy *et al.*, 2022). The virtual avatar is best for remote interactions, such as online customer service and virtual shopping, where a visually represented, friendly avatar can make the digital experience more personal and engaging. Importantly, its visual and emotional elements are particularly effective in situations where fostering rapport and trust is essential. Examples include telehealth consultations and online learning platforms where the virtual avatar's warmth and relatability can dramatically enhance customer comfort and satisfaction, enriching the quality of remote engagements (Winkler *et al.*, 2023).

2.3.3 Holographic projection. An AI concierge with holographic projection is virtually embodied in the real world. It employs projection technology, like holograms, to create a 3D image in a physical space. This innovative approach offers an immersive experience by simulating the appearance and interactions of a real person, with the main difference being the lack of tactile sensation. Holographic projection is ideally suited for on-site situations where visual impact is desirable and physical assistance is not necessary. Its presence in the physical world can be especially advantageous in public spaces where drawing attention is beneficial. Compared to a physical embodiment, a projected entity is more cost-effective.

2.3.4 Tangible service robot. A tangible service robot is an AI concierge with a physical presence. It is designed to satisfy the innate human craving for tangible interactions (Dirican, 2015). Unlike virtual or projected AI solutions, this form of AI concierge offers human-like sensory experiences, aligning with the natural propensity for touch and physical presence (Dirican, 2015). Tangible service robots are increasingly employed in on-site settings where there is a need to convert communication into the execution of personalized, tangible tasks. For example, a service robot can escort customers through the servicescape, personalize the route and highlight relevant products and features according to customer interest. Furthermore, the tangible service robot can go beyond the human ability to perform multiple physical tasks simultaneously. For example, in luxury hotels, guests may prefer to have their luggage with them to increase their sense of control and security. A tangible service robot can effortlessly transport heavy luggage while maintaining seamless and friendly communication with guests, ensuring a smooth and enjoyable experience.

The evolution from a dialog interface to a virtual avatar, and then to a projected entity and tangible service robot may imply a hierarchy of capabilities. However, the best AI concierge choice for a business is not necessarily the most sophisticated or complex one. Rather, the optimal choice depends on the specific needs and goals of the business context. Table 1 demonstrates examples of different forms of AI concierges across various industries.

2.4 Key attributes of AI concierges

In the rapidly evolving landscape of AI concierge services, four key attributes underscore the technological progress made in this domain. In particular, an advanced AI concierge will (1)

AI type/firm	AI technology	Description
<i>Dialog interface</i>		
Expedia	ChatGPT	Integrated ChatGPT to enhance its online travel booking experience, offering real-time conversational assistance for flight, hotel and other travel product reservations. This advanced AI-powered service allowed users to easily inquire about travel options, make personalized bookings and receive instant support for travel-related queries
Cleveland clinic	Watson AI	Integrated Watson AI concierge to deliver personalized and interactive assistance, improved patient engagement and satisfaction by offering guidance, answering questions, and providing access to healthcare resources
Men's wearhouse	Wingman	Introduced Wingman to enhance the shopping experience for menswear with labor-saving benefits. It assisted shoppers in selecting suitable attire by offering style advice, answering product-related questions, and providing access to an extensive range of men's fashion resources
Volvo	Volvo Concierge	Introduced the Volvo Concierge, a service aimed at enhancing car ownership experience, available even while driving. The service had already been implemented in the Volvo XC90, providing detailed guidance, answering vehicle-related questions, and offering easy access to a suite of automotive services and resources
<i>Virtual avatar</i>		
GHOTEL Hotel & living Bochum	Fritz	Transformed the hotel self-check-in by introducing an individual virtual avatar named Fritz. Fritz was designed to help with a human-like presence, providing information, responding to enquiries, delivering customized recommendations, and engaging in small talk
Allianz (insurance)	Sensely	Partnered with Braide's My Health Concierge, EYVA was designed to assist medical professionals in accessing the latest patient data. Additionally, it employed AI for pre-quoting and directing patients to the appropriate doctor, eliminating barriers that previously hindered ease of access to care. The incorporation of an avatar helped humanize the process, providing additional emotional support for patients
Kookmin bank	DeepBrain	Integrated DeepBrain to foster an emotional and personalized connection with customers. Besides the usual bank services provided at kiosks, it enabled a deeper emotional engagement with customers, making them feel more appreciated. This approach helped in retaining customers and increasing interest in their financial offerings
DFW airport	Watson AI	Integrated the Watson AI concierge with a virtual avatar named Iris to assist travelers at information kiosks, enhancing the experience with a more emotional connection. Beyond basic functionalities, Iris boasted emotional detection and response capabilities, engaging with travelers through empathetic facial expressions and gestures
<i>Holographic projection</i>		
CIC hospitality	Holobox	Introduced Holoconnect's Holobox at Aiden hotels, replacing traditional front desk staff with holograms. This innovative solution provided a personalized and immersive guest experience at front desks, addressing staff shortages
Oswestry hospitality	Tensator	Integrated Tensator Virtual Assistant as a concierge service at the hospital, simplifying the reception and registration process with personalized interactions. Moreover, it enhanced warm communications, offering a more engaging experience compared to traditional self-check-in kiosks

Table 1.
Contemporary applications of AI concierge in the service sector

(continued)

AI type/firm	AI technology	Description
Erste bank	Vesna	Unveiled “Vesna,” a holographic banking assistant, at the Bratislava branch in Slovakia, designed to handle more than 150 different banking scenarios. Vesna personalized financial concepts and services for consumers. Moreover, interacting with a projected human-like figure made banking interactions more realistic and empathetic, leading to enhanced customer satisfaction and loyalty
Boston Logan airport	Tensator	Integrated Tensator Virtual Assistants at terminal checkpoints to educate passengers on the do’s and don’ts of security screening ahead of time. It freed up transportation security officers’ time for other duties. Moreover, the use of projected TSO images added a perception of both approachability and authority, making communication more efficient and enhancing the overall effectiveness of the screening process
<i>Tangible service robot</i>		
Mandarin oriental hotels	Pepper	Implemented Pepper, a humanoid robot, into the hotel lobby to enhance the guest experience. Pepper was uniquely designed to recognize and respond to human emotions and behaviors. Additionally, this advanced robot further assisted in providing directions and performing various tangible tasks
Luvozo	Sam	Sam, a robotic concierge, was designed to transform senior living communities. Sam personalized resident check-ins, communication, automated fall hazard assessments, remote operation for enhanced social interactions, and support in non-medical tasks to solve the labor-shortage challenge in those facilities
Softbank	Pepper	Developed Pepper, the first humanoid robot in banking service to interact with consumers. Pepper personalized responses to inquiries and offer customized entertainments, such as playing music, lighting up, dancing, and even taking selfies with customers. Moreover, Pepper could also provide tangible guidance by leading customers in the right direction
Incheon airport	Airstar	Deployed at South Korea’s Incheon International Airport, AirStar was crafted to aid travelers by guiding them to their destinations. Additionally, it offered personalized shopping and dining recommendations, provided information in multiple languages for inquiries, and entertained by taking selfies, dancing and telling jokes

Source(s): Table created by the authors

Table 1.

exhibit a sophisticated *semantic understanding* of auditory and visual inputs, (2) establish and sustain an *emotional connection* with the customer fostering customer-AI concierge rapport, (3) demonstrate *proactivity* in fine-tuning the customer journey by anticipating and addressing customer needs without explicitly being prompted and (4) display *omnipresence* where the AI concierge is always present and attends to a wide range of tasks across the customer journey. While examining the fundamental forms of AI concierge interfaces (i.e. ranging from dialog interfaces to tangible service robots), it is evident that all of them incorporate these four attributes. However, the depth of integration and emphasis can vary, ranging from low to high levels for each of the four attributes as we discuss next (see Figure 2).

2.4.1 Semantic understanding. Powered by natural language processing, semantic understanding constitutes the bedrock of AI concierge systems. It is this foundational capability that elevates AI concierges beyond traditional self-service technologies.

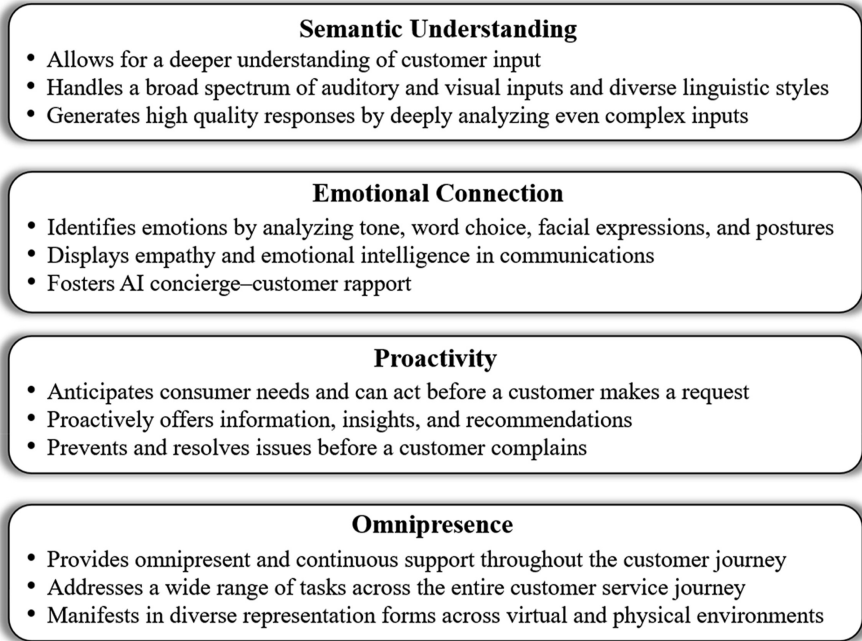


Figure 2.
AI concierge's key
attributes

Source(s): Figure created by the authors

AI concierges excel at discerning context and nuances, achieving a deeper level of semantic understanding (Tewari, 2021). This heightened semantic understanding allows an AI concierge to adeptly handle diverse linguistic styles and navigate language errors. Moreover, advanced AI concierges demonstrate the capacity to interpret a broad spectrum of auditory and visual inputs, encompassing voice commands, scanned texts, uploaded photos, facial expressions and even environmental details captured through scanning technologies.

These capabilities result in the delivery of unique outputs based on a nuanced understanding of such inputs. An exemplary illustration of these capabilities is evident in GenAI which now possesses the ability to see, hear, speak, and generate images from a simple conversation (Dwivedi *et al.*, 2023). Crucially, the integration of GenAI into AI concierge systems together with a firm's customer relationship management and transaction systems (needed for personalization and accuracy of customer details), product features, policies and pricing schedules (needed to replace probabilistic searches with facts to ensure correct information is provided to the customer), and memory (i.e. enterprise-based GenAI systems remembering of past requests and customer responses to them) ensures not only accuracy in responses but also precision in tailoring those responses to the individual customer's unique situation and needs. This integration opens up a myriad of opportunities to elevate the overall customer experience.

2.4.2 Emotional connection. Following the progression of semantic comprehension, the next evolutionary leap for AI concierge systems involves establishing an emotional connection that bridges the divide between AI concierges and traditional concierge services (Robinson *et al.*, 2020; Nica *et al.*, 2022). This advancement, for example, enables AI concierges to not only interpret literal message content but also understand the underlying emotions by analyzing the tone and choice of words in a customer's query. To date, hospitality settings

(e.g. hotels) have largely implemented AI-driven concierge services to operate in guest service and support roles such as delivering amenities (Kim, 2017), storing luggage (Hochman, 2018), and handling simple guest interactions (Shin and Jeong, 2020). The roles of AI concierges, as shown from these examples, have largely been restricted to handling routine and repetitive tasks, while traditional concierges have continued completing tasks characterized by complex interactive and emotional elements. Several factors contribute to these trends, including perceptions that AI and robotic services lack intention and feeling (Pitardi *et al.*, 2022; Wirtz *et al.*, 2018), and possess a low ability to engage in socially complex processes such as deep emotional acting (Huang and Rust, 2021; Lu *et al.*, 2020).

As automation continues to gain prominence in service contexts (Bornet *et al.*, 2021), it is critical that automated services develop relational abilities such as detecting, understanding and displaying emotions while interacting with customers. This level of empathetic intelligence has continued to emerge across AI services (Huang and Rust, 2018), largely coinciding with the development of avatar-based AI resembling humans through the introduction of *personas*. However, the development of emotional abilities in automated service agents remains in its nascent stages. Recent work has identified unique ways in which automated services can develop emotional connections with customers, such as through processing data to provide customers with recommendations that cater to their preferences (Leño Calleja *et al.*, 2023; Yalcin *et al.*, 2022). As highlighted in this example and those described in Table 1, we predict that AI concierges will continue to develop unique relational and emotional capabilities to effectively manage complex interactions with customers. Specifically, combining AI concierges' increased skills in managing complex customer interactions with their evolving abilities in rapidly gathering, organizing, and analyzing data in real time (e.g. Bornet *et al.*, 2021) will create novel avenues for combining emotional and rational components to further enhance the customer experience. By weaving emotional abilities into their fabric, AI concierges can foster a bond with customers that is vital for delivering genuinely personalized and impactful concierge services (cf. Borghi *et al.*, 2023; Huang and Rust, 2021).

2.4.3 Proactivity. Leveraging advanced computer vision, an AI concierge does not passively await customer prompts but instead can proactively anticipate their needs. Combining historical data, behavioral patterns, and predictive analytics, proactive AI concierges can suggest actions, offer insights, and automate routine tasks without explicit customer commands (Bornet *et al.*, 2021; Sharma *et al.*, 2021). For example, by analyzing a customer's attire and factoring in their known preferences, an AI concierge could recommend entertainment choices that align with the customer's context and mood. Similarly, they can detect potential hazards in real time and promptly warn customers. This evolution from a responsive service to a proactive, anticipatory concierge not only heightens customers' convenience but also underscores the AI's potential as an intuitive ally in the customer journey from end to end.

2.4.4 Omnipresence. Omnipresence in AI concierge services resembles adaptive responsiveness to address customers' needs throughout the service journey based on circumstances, while also maintaining continuity in the sense that the same entity accompanies the customer throughout the journey. Such continuity fosters a sense of familiarity, convenience, and trust, thereby enhancing customer satisfaction. Consider Sam, the AI concierge (see Table 1) who assists a customer from the initial booking stage through their entire hotel stay. Sam provides personalized support in various forms: as a virtual avatar on screen for booking assistance, through voice dialogue to offer guidance during the drive to the hotel, as a physical robot for luggage assistance upon arrival, and via holographic projections for facilitating check-in/out processes and addressing inquiries within the hotel. This showcases Sam's omnipresence, adeptly adjusting to the customer's evolving needs and circumstances.

3. The roles of AI concierge in the customer journey

To understand how AI concierges transform service-based industries, this section first explores the traditional responsibilities of human concierges in the customer journey – spanning the pre-encounter, service encounter and post-encounter stages. Following that, the emerging role of AI concierges in shaping the customer experience is explored.

3.1 Human concierge

The *pre-encounter stage* involves the initial interactions between the customer and service provider, along with onboarding processes that familiarize the customer with the service offerings. Employees play a crucial role in this stage, and their efforts can serve as predictors of a customer's future engagement with the service provider (Voorhees *et al.*, 2017). For example, if a customer seeks information about service offerings from a traditional concierge and the concierge's response lacks key factors associated with customer satisfaction – such as helpfulness, generosity and responsiveness (Isen, 2001) – the customer may be discouraged from further engaging with the service provider. Consequently, the customer's perception of the concierge's service quality can significantly influence their pre-encounter experience (Jiang *et al.*, 2018).

The focal *service encounter* can involve the human employee at various touchpoints. In a spa setting, for instance, Lo *et al.* (2015) assessed the role of the employee knowledge (e.g. about treatments and products), skills (e.g. communication and persuasion), and experience (e.g. operating guest management systems) necessary for providing an enjoyable experience to customers. By staging services as experiences, the concierge can play an influential role in creating a competitive advantage, often driven by high-quality concierge-customer interactions (Redditt *et al.*, 2022).

Following the focal service encounter, the *post-encounter stage* can encompass developing and sustaining relationships with customers as well as service recovery efforts in the case of a service failure (Voorhees *et al.*, 2017). For example, to maintain relationships with customers, human concierges might engage in post-encounter interactions such as providing customers with personalized offerings to build customer loyalty and engagement.

3.2 AI concierge

To lead the AI revolution, companies may want to strategically center their customer experience around an AI concierge. This transformative approach encourages experiential orientation extending beyond what is offered by traditional concierges. Unlike traditional concierges, an AI concierge can offer round-the-clock availability, scalability, consistency, analytical capabilities and multilingual support to customers (cf. Chen *et al.*, 2023; Huang and Rust, 2021). With these advantages, the use of AI concierge services can uncover unique avenues for delivering sensory, affective, intellectual and physical engagement for an enhanced customer journey. The ultimate advantage offered by AI concierges is the ability to integrate data to *better understand customers* across all stages of their service journeys (see Table 2 for customer experience mapping focusing on the role of the AI concierge). By knowing and serving customers better, momentum can be gained to move a customer from one stage to the next by going above and beyond.

3.2.1 Roles of AI concierges in the pre-encounter stage. The pre-encounter stage is primarily characterized by marketing-related communications, enabling customers to gather and compare information about a service (Jiang *et al.*, 2018; see Table 2). In retailing contexts, for example, advertising, event marketing and sales promotions are integral for promoting brands and businesses (Jiang *et al.*, 2018). AI concierges can automate and enhance the processes needed to meet the goals of the pre-encounter stage. AI concierge services can facilitate the creation and monitoring of touchpoints that represent the initial planned and

	Pre-encounter stage	The customer journey Service encounter stage	Post-encounter stage
Objectives	<ul style="list-style-type: none"> Enhance awareness of the service using marketing-related communications Assist customers in gathering and comparing information about service offerings Build customer engagement with the firm 	<ul style="list-style-type: none"> Facilitate the seamless ordering and consumption of service Offer efficient, accurate and personalized service Ensure enjoyable, high-quality touchpoints for customers 	<ul style="list-style-type: none"> Ensure customer satisfaction and repeat purchase by developing relationships Foster sustained customer engagement to build customer loyalty Engage in service recovery efforts in instances of service failure
Roles of AI concierge	<ul style="list-style-type: none"> Automate organization and presentation of relevant information about the service Facilitate the creation and monitoring of touchpoints Ensure the customer's understanding of service offerings and offer information in line with historical customer data Manage emotions and preferences driven by customer needs 	<ul style="list-style-type: none"> Serve as a companion to the customer by continuously engaging them and ensuring satisfactory experience Handle customer requests, personalization and customization to ensure a successful customer journey Provide personalized add-on service recommendations Keep customers informed in case of service delays or other failures; work on and offer solutions to service issues 	<ul style="list-style-type: none"> Communicate directly with the customer to collect customer data and re-engage them in new offerings Encourage customer feedback and word-of-mouth Recommend and implement service recovery promptly in the case of failure situations
Outcomes	<ul style="list-style-type: none"> Customers gain information about the service to make informed purchase decisions 	<ul style="list-style-type: none"> Ensure a frictionless, pleasant, and satisfying service experience 	<ul style="list-style-type: none"> Build customer loyalty seek customer engagement, and promote repeat purchases

Source(s): Table created by the authors

Table 2.
AI concierges in the customer journey

unplanned engagements between a service provider and a customer. These touchpoints can be individually tailored using historical customer data related to cognitive, emotional, and experiential responses (Hoyer *et al.*, 2020; Liu-Thompkins *et al.*, 2022), paired with the accessibility- and availability-related advantages of AI concierges.

For example, in the healthcare industry, the pre-encounter stage is characterized by the sharing of information for health services (e.g. cost breakdowns, associated benefits and risks; Richter *et al.*, 2023) to aid patients in making informed decisions based on their specific circumstances. Furthermore, patients differ in their needs for communication depending on factors such as the need for information, involvement of family, need for control and prior knowledge and experience (for a review, see Chan *et al.*, 2012). Integrating AI concierges can offer unique advantages through their capacity to assess patients' current knowledge,

emotions, and preferences to communicate information in a manner tailored to their needs. Additionally, customers (or patients, following the previous example) often hesitate to seek information due to a lack of confidence and understanding, but an AI concierge can attenuate these concerns of potential embarrassment due to their perceived inability to make judgments (cf. [Pitardi et al., 2024](#)), in turn serving as a confidant.

3.2.2 Service encounter stage. For the effective incorporation of AI into the customer journey, the role of the AI concierge must extend seamlessly into the focal service encounter stage. Given the evolving nature of the customer journey, the sustained presence of an AI concierge as a companion throughout the journey introduces multiple touchpoints, in turn influencing the engagement and satisfaction derived from an experience ([Rana et al., 2022](#)). This continuous engagement enables companies to pivot their focus from functionality (i.e. what the AI concierge can deliver) to an experiential focus (i.e. fulfilling the customer's desires), thereby cultivating a customer-centric journey characterized by interdependent touchpoints facilitated by an AI concierge.

For instance, if a guest attempts a mobile hotel check-in and receives a notification that the room is not yet prepared, the AI concierge can swiftly intervene to reduce frustration by offering a complimentary drink upon their arrival at the hotel. This gesture seamlessly integrates into the customer journey and creates the impression of a pre-planned touchpoint. Through leveraging AI concierges, companies can transform service delivery limitations into intentional touchpoints, minimizing threats to customer satisfaction.

AI concierges enable firms to facilitate numerous small interactions that offer brief but delightful experiences, and these moments of delight can collectively generate a sense of customer satisfaction that surpasses that of a single delight incident ([Sivakumar et al., 2014](#)). Here, AI concierges with their qualities of efficiency, accuracy, and personalization may outperform even human concierges in discerning trends and analyzing customer characteristics and transaction records ([Shin and Jeong, 2020](#)).

3.2.3 Post-encounter stage. The principal aim of the post-encounter stage is to ensure customer satisfaction, repeat purchase and customer engagement ([Voorhees et al., 2017](#)). AI concierges offer unique capabilities beyond those of traditional concierges to both directly communicate with customers and gather valuable data (e.g. online reviews) after the focal service encounter. AI concierge can be deployed to create avenues for customers to re-engage with the firm by sharing new offerings, collecting customer satisfaction data and perhaps even prompting customers to engage in word-of-mouth.

Furthermore, customer complaints often arise in this stage and are recognized as a critical touchpoint ([Voorhees et al., 2017](#)). In such situations, AI concierges can play a crucial role in addressing service failures promptly, leveraging real-time data to understand customer preferences for potential service recovery pathways. AI concierges can proactively express empathy, offer discount coupons and engage in consistent communication to keep customers informed during the service recovery process.

4. Opportunities of deploying AI concierges

The deployment of AI concierges presents a myriad of opportunities for both customers and firms. For customers, these benefits encompass improved access and responsiveness, enhanced personalization and customization, and mitigated metaperception discomfort in service interactions, while also offering scalability and cost-effectiveness for firms. By examining these opportunities, the subsequent sections illuminate the transformative potential of AI concierges in reshaping customer experiences and service delivery.

4.1 Improving access and responsiveness

Compared to a human concierge, one of the critical advantages of an AI concierge lies in its ability to be available and accessible to numerous customers simultaneously (Ivanov and Webster, 2017). Free from the natural physical and psychological limitations of human agents, an AI concierge operates 24/7, 365 days a year. Its automated service drastically reduces waiting times for connections, providing customers with almost immediate responses to their inquiries.

Moreover, the versatility of an AI concierge extends to multilingual communication, eliminating the challenges and expenses associated with hiring multilingual staff. It can be designed to seamlessly interact in multiple languages and even sign language. Additionally, an AI concierge enhances the experience for customers requiring special accommodations by automatically adjusting settings such as volume or font size to suit their preferences, and physical service robots can be deployed to, for example, assist individuals in wheelchairs.

4.2 Enhancing personalization and customization

Leveraging advanced ML algorithms and deep neural networks, AI concierges excel in personalizing and customizing the customer journey based on individual profiles and past behaviors (Deb *et al.*, 2018). This involves an in-depth analysis of the customer's purchase history to identify preferences, along with predictive analytics that account for unique characteristics. Imagine a scenario where a frequent guest checks in to a hotel; through quick analysis of past behaviors, the AI concierge learns that the guest prefers a quiet room due to sensitivity to noise and visits the spa frequently. Subsequently, the AI concierge warmly greets the guest, offering a tranquil guestroom conveniently located on the same floor as the spa center.

Moreover, customization extends to the design of the concierge interface. Customers may select from a range of AI concierges with diverse demographic attributes. For instance, in a healthcare setting, an elderly Japanese patient undergoing heart surgery in a U.S. hospital may opt for an AI concierge with an Asian appearance, fluent in Japanese, and adhering to Japanese communication norms. This tailored approach to customization elevates the customer service experience, creating a memorable and personalized interaction.

4.3 Mitigating metaperception and discomfort

Psychologically uncomfortable service interactions are pervasive, evident in scenarios such as participation in potentially embarrassing services like overweight and obesity programs (Holphöwer and van Doorn, 2023), and in uncomfortable situations such as when a server is waiting while a guest still has not decided what to order (Pitardi *et al.*, 2024). Within these interactions, customers frequently hold concerns regarding the perceptions of frontline employees (Huang and Liu, 2020; Pitardi *et al.*, 2022).

The theory of mind posits agency as a characteristic linked to the capacity to articulate intentions and formulate opinions (Waytz *et al.*, 2014). Recent research has shown that AI agents are commonly viewed as possessing lower agency compared to human counterparts (Garvey *et al.*, 2023). As a result, customers may exhibit reduced apprehension about the opinions AI concierges may form about them – a cognitive process called metaperception, which involves individuals evaluating how others perceive them or their actions (Albright *et al.*, 2001). This diminished concern results in heightened comfort levels during otherwise uncomfortable encounters, ultimately eliciting more favorable responses from customers (Pitardi *et al.*, 2024).

4.4 Scalability and cost-effectiveness for the firm

When it comes to expanding operations, relying on human staff can be challenging and expensive. Traditional methods of scaling the workforce pose difficulties in readily augmenting human resources, often accompanied by substantial financial investments for each additional headcount. In contrast, AI concierges offer significant economies of scale, with the majority of costs incurred during the research, development and implementation phases.

Moreover, human employees are susceptible to emotional burnout, leading to elevated turnover rates. For instance, contact-center agents frequently endure verbal abuse and confrontations lacking empathy from customers, resulting in turnover rates as high as 38% (The Economist, 2023). In contrast, AI concierges are immune to emotional exhaustion (Hermann, 2022). As such, AI concierges can significantly reduce costs associated with employee burnout, turnover and resultant constant recruitment and training, further solidifying its appeal as a scalable and cost-effective alternative (Wirtz *et al.*, 2023a).

5. Challenges of deploying AI concierges

The adoption of AI concierges presents firms with unprecedented opportunities to revolutionize customer service and operational efficiency. However, alongside these opportunities come a myriad of challenges that must be carefully navigated. In this section, we discuss the various challenges associated with AI concierges, encompassing customer perceptions of status and exclusivity, reduced emotional authenticity, identity and privacy threats, as well as legal and ethical risks.

5.1 Customer perceptions of status and exclusivity

Concierge services have long symbolized luxury, typically reserved for elite clientele. However, the introduction of AI concierge services risks altering this perception, potentially making them seem automated and aimed at the mass market. Hence, managing customer perceptions of status and exclusivity becomes crucial. A promising approach is to provide customers with options, allowing them to utilize an AI concierge for convenience and privacy (Ambika *et al.*, 2023), while preserving the option for interactions with a human concierge. For instance, luxury hotel chains like Raffles Hotels & Resorts integrate AI concierge services through interactive tablet interfaces in its suites, enabling guests to place orders and arrange services without having to interact with their (human) butler. However, the butler is always only a call or text message away when a guest prefers to communicate with a human (Holmqvist *et al.*, 2020).

5.2 Reduced emotional authenticity

In the emerging “feeling economy,” human workers are poised to excel in interpersonal and empathetic tasks, while AI is predominantly suited for analytical and cognitive functions (Huang and Rust, 2018). However, the integration of AI concierges raises concerns regarding reduced emotional authenticity in service interactions. Furthermore, AI concierges may struggle to accurately interpret customers’ emotional cues, leading to potential misinterpretations (e.g. mistaking a smirk for a smile) and hindering genuine customer connection. Moreover, the distinction between “deep acting,” characterized by genuine emotional expression, and “surface acting,” involving superficial emotional displays (Jeger and Wirtz, 2017), underscores the challenge AI faces in replicating authentic emotional responses. As AI lacks genuine emotions, its expressions during service interactions may appear artificial and devoid of authenticity (Pitardi *et al.*, 2024), potentially compromising the quality of customer experience.

5.3 Identity and privacy threats

AI can become unlikeable when they resemble humans too closely, a phenomenon known as the uncanny valley effect (Mori *et al.*, 2012). Grounded in evolutionary theory, this perception stems from a sense of threat associated with human-like entities (Gray and Wegner, 2012), leading to concerns about potential identity threats such as loss of control and AI dominance over humanity (Wirtz *et al.*, 2023b). Excessive realism and intelligence in AI concierges can exacerbate these fears, triggering instincts of danger and avoidance among customers (Mori *et al.*, 2012; Mende *et al.*, 2019).

Moreover, the extensive interaction between customers and AI concierges, combined with access to sensitive personal data such as locations, biometrics, preferences, behavioral patterns and financial information, pose significant privacy threats (cf. Pitardi *et al.*, 2021). This heightened risk of unethical use of customers' private data is exacerbated by digitalization and cloud storage, facilitating potential analysis for marketing purposes and potential distribution without the customer's awareness. This represents a shift from the more controlled management of customer data in traditional human concierge scenarios. Recent work on corporate digital responsibility (CDR) underscores the importance of AI concierges treating customers fairly and ethically (cf. Wirtz *et al.*, 2023b).

5.4 Legal and ethical risks

The integration of AI concierges introduces significant challenges concerning legal and ethical risks. Recent instances of GenAI "hallucinations" have happened across various industries. For instance, a lawyer in New York faced sanctions for unknowingly citing six entirely fabricated cases generated by ChatGPT in his court filings, revealing the urgent need for rigorous verification (Applegate, 2023). Such inaccuracies, whether in fabricated data or incorrect advice, can profoundly impact a company's reputation and lead to legal consequences.

Furthermore, the inherent bias in GenAI and Large Language Models (LLMs), primarily trained on data from Western English speakers, raises concerns about overlooking cultural diversity (Dwivedi *et al.*, 2023). The underrepresentation of marginalized groups in training data can result in biased outcomes, perpetuating concerns regarding diversity, equity and inclusion (Wirtz *et al.*, 2023b). AI concierge services may struggle to produce culturally relevant content or inadvertently promote biased representations and communications. Recognizing and addressing these risks is essential, as they transcend mere technical glitches or costs, often reflecting systemic biases that necessitate thoughtful consideration and proactive mitigation measures.

6. Conclusions, implications and further research

6.1 Conclusions and implications for theory

This article is the first to conceptualize the AI concierge in the context of customer journey management. We define an AI concierge as a technologically advanced, intelligent, and personalized assistant that is dedicated to an individual customer and proactively addresses that customer's needs throughout the service journey.

Our conceptualization of AI concierge diverges from prior research on conversational agents or service robots in several key aspects. While earlier studies often concentrate on completing transactional routine tasks within specific departments (Choi *et al.*, 2019; Crolic *et al.*, 2022; Sands *et al.*, 2021), we are the first to position AI concierge as a dedicated entity overseeing the entirety of the customer journey, emphasizing four key attributes of AI concierges: (1) exhibiting *semantic understanding* of auditory and visual inputs; (2) creating an *emotional connection* with the customer; (3) demonstrating *proactivity* in refining the

customer's experience; and (4) having *omnipresence* where the AI concierge is always present and attends to a wide range of tasks across the customer journey.

While prior research often treats conversational agents and service robots as separate research topics (Mariani *et al.*, 2023; Wirtz *et al.*, 2018), we posit that these are merely different representation forms AI concierges may manifest in. We delineate four fundamental forms of AI concierge: dialog interface (no embodiment), virtual avatar (embodiment in the virtual world), holographic projection (projection in the physical world) and tangible service robot (embodiment in the physical world). This positions the AI concierge within the context of customer journeys rather than merely as the adoption of new technology. Moreover, our research contributes to existing service literature by presenting a holistic and innovative perspective on AI across its various manifestations, bridging literature on AI, automatic and robotic services, and conversational agents.

Building upon the notion of the AI concierge, we provided an overview of its potential applications at various stages of the customer journey (i.e. pre-encounter, service encounter and post-encounter stages). We highlight the importance of sustaining emotional connection, wherein AI concierges excel in discerning emotions, displaying empathy, and fostering genuine AI concierge–customer rapport (Robinson *et al.*, 2020; Nica *et al.*, 2022). Additionally, AI concierges aim for a high level of proactivity, anticipating customer needs, resolving issues preemptively and consistently going above and beyond to delight their customers (cf. Bornet *et al.*, 2021; Sharma *et al.*, 2021). Throughout the customer journey, AI concierges can deliver tailored, efficient and emotionally resonant experiences.

Furthermore, we shed light on the multifaceted opportunities presented by the deployment of AI concierges, which extend beyond mere operational efficiency. For customers, AI concierges offer enhanced accessibility and responsiveness, fostering personalized experiences and mitigating the metaperception and discomfort often encountered in traditional service interactions. Meanwhile, for businesses, AI concierges hold the promise of scalability, streamlining operations and cost-effectiveness. However, amid these promising prospects, challenges emerge. Customers may grapple with concerns regarding perceived status reduction and authenticity, while significant issues related to data privacy and ethics demand attention. Through a thorough analysis of the opportunities and challenges associated with AI concierge deployment, this article enriches and advances the extant literature by providing critical insights into how service organizations can unlock the transformative potential of AI concierges while ensuring customer satisfaction and adherence to regulatory and ethical requirements.

6.2 Implications for practice

As businesses embrace AI to elevate customer experiences, our work not only introduces AI concierges but also offers an in-depth exploration of their various forms, attributes and roles throughout the customer journey. Serving as a valuable resource, it equips practitioners with insights into the essence and diverse applications of AI concierges within their operations. Incorporating AI concierges requires more than simply using them as branding tools; they must provide tangible functionalities that truly enrich the customer journey. Treating AI concierges as genuine, dedicated and proactive employees overseeing the entire customer journey, rather than just an automated system, is imperative. AI concierges should not merely react to customers but actively assess their emotions and endeavor to forge genuine emotional connections with them. With its constant availability, AI concierges should be easily accessible to assist customers with any task, anywhere, and at any time.

While conversational agents and robotic services are commonly assigned to specific departments for routine tasks (e.g. Huang and Liu, 2022; Lv *et al.*, 2021; So *et al.*, 2024), our research indicates that their design and implementation can be optimized to create more

impactful AI concierges. For example, GHOTEL Hotel & Living Bochum has introduced a virtual avatar named Fritz exclusively at the hotel check-in desk. To elevate virtual avatars like Fritz into authentic AI concierges, they should be integrated in various forms throughout the entire customer journey, exhibiting proactive behaviors and attentiveness to customers' emotional states. This entails engaging customers virtually through dialog interfaces or avatars on mobile and wearable devices before and after encounters, as well as appearing in the physical world, such as holographic projections for greetings customers and tangible robots for assisting with luggage and food delivery during service interactions. Ultimately, Fritz should embody a dedicated concierge role, providing continuous assistance and support throughout the customer's interaction with the brand. This underscores our emphasis in this article on integrating AI as a crucial component throughout the entire customer journey, rather than treating it as a standalone feature.

The true value proposition of AI concierges lies beyond mere conversational abilities; it resides in their ability to deliver human-like services while overcoming the physical and affective limitations of human labor. Harnessing AI technologies, AI concierges have the potential to outperform humans in various dimensions, including semantic understanding (enabled by their superior data analysis from comprehensive input sources), emotional connection (as they are immune to emotional burnout), proactivity (enabled by predictive analysis), and omnipresence (accessible anytime, anywhere). These capabilities make AI concierges particularly valuable in labor-intensive sectors such as hospitality, retail, travel, and healthcare. Hence, our article offers essential insights for professionals in these fields on leveraging AI concierges to elevate the customer experience.

6.3 Future research agenda

The introduction of the concept of AI concierge to the service literature offers numerous avenues for future research. Qualitative research using interviews and in-depth case studies as well as empirical research utilizing surveys and field experiments can be used to validate the theoretical propositions put forth in this paper and offer deeper practical insights. We highlight key themes we find particularly promising in the following sections and list related research questions in [Table 3](#).

6.3.1 AI concierges in customer journey. The incorporation of AI concierges in customer journeys will result in a profound shift in how customers engage with firms. Therefore, it is worthwhile to explore how customers perceive, prefer, and respond to AI concierge-driven service interactions, thereby building on existing work on AI, chatbots and service robots ([Huang and Rust, 2021](#); [Lu et al., 2020](#); [Mariani et al., 2023](#); [Pitardi et al., 2024](#); [Robinson et al., 2020](#)). For example, with the rapidly evolving capabilities of AI concierges to create new digital touchpoints to further enhance the customer journey ([Rana et al., 2022](#); [De Keyser et al., 2020](#)), it would be essential to understand how AI concierges can be used to develop and facilitate novel and value-adding touchpoints.

As the interactivity between AI concierges and customers increases, it is important to explore customer attitudes towards AI concierges. For example, attributes like customer orientation in service employees have been linked to customer satisfaction and perceived service quality ([Gazzoli et al., 2013](#); [Homburg et al., 2011](#)). However, how AI concierges can exhibit similar attributes to create favorable customer attitudes and behaviors toward the firm have not received much attention in the literature but likely serves as a key factor in enhancing the customer journey.

6.3.2 Design of AI concierges. Despite substantial research on anthropomorphism of service robots (e.g. [Huang and Liu, 2022](#); [So et al., 2024](#)), the understanding of other design elements such as gender, ethnicity, and dressing styles, remains unclear. For instance, due to gender stereotyping ([Eyssel and Hegel, 2012](#)), an AI concierge with a female physical appearance may be perceived as more communal and sociable, while their male counterparts

Future research topics	Research questions
<i>AI concierges in the customer journey</i>	
AI versus human concierges	<ul style="list-style-type: none"> • How do preferences for interactions with AI versus human concierges emerge across different points in the customer journey? • What are the different customer interaction patterns for AI and human concierges?
New digital touchpoints	<ul style="list-style-type: none"> • How can AI concierges effectively identify customers' desired frequency and types of touchpoints? • What new touchpoints can AI concierges introduce to enhance customer engagement?
Rapport and trust	<ul style="list-style-type: none"> • How can customer-AI concierge rapport and trust formation be fostered? • To what extent does trust in AI concierges hinge on perceptions of their competence or benevolence? • What contextual factors amplify or mitigate the relationship between customers and AI concierges?
Service dissatisfaction toward AI concierges	<ul style="list-style-type: none"> • How can AI concierges accurately identify and address customer dissatisfaction? • What are the most effective strategies for AI concierges to initiate and execute service recovery? • How can AI concierges be optimally utilized in navigating complex scenarios necessitating creative problem-solving, negotiation, and persuasion?
<i>Design of AI concierges</i>	
Gender, ethnicity, dressing style	<ul style="list-style-type: none"> • Do customers have preferences for gender, ethnicity, dressing, physical appearance, voice, and gestures of AI concierges? Which dimensions and their combinations would be most effective in eliciting favorable customer responses? • How would granting customers the autonomy to select the appearance of an AI concierge influence their overall experience? In addition to offering fixed personas, what specific characteristics should be included as customizable options for customers to choose from?
Cuteness	<ul style="list-style-type: none"> • When and how should elements of cuteness be integrated into AI concierges to augment their appeal and enhance customer engagement? • In what contexts and for which demographics will the integration of cuteness be most impactful in enhancing customer experience?
Language styles	<ul style="list-style-type: none"> • How should AI concierges talk? How do customers perceive the appropriateness of various language styles, such as figurative, assertive, concrete language, and subjective language? • In what circumstances and for which audience should each language style be employed by AI concierges?
<i>Privacy and ethics</i>	
Mitigating privacy concerns	<ul style="list-style-type: none"> • How do customers perceive the trade-off between personalized service and privacy when interacting with AI concierges, and what factors influence their willingness to share personal information? • How can AI concierges be designed to prioritize user privacy and data protection while still delivering personalized and efficient services? • How can transparency and user control be incorporated into the operation of AI concierges to empower users to understand and manage their data privacy effectively?
Hallucinations	<ul style="list-style-type: none"> • What strategies can be implemented to detect and mitigate hallucinations in AI concierges? • How can interdisciplinary collaborations between cognitive scientists, AI researchers, and human-computer interaction experts contribute to a better understanding and management of hallucinations in AI concierges?

Table 3.
Exemplar questions for
future research

Source(s): Table created by the authors

may be viewed as more agentic. Furthermore, the dressing style of the AI concierge, whether futuristic in a silver metallic bodysuit or classic in business attire, could shape customers' expectations regarding the hedonic and utilitarian nature of the AI concierge services. Finally, the degree of cuteness is a potentially interesting design factor. AI embodying Kindchenschema cuteness, or baby schema, with infant-like features such as large eyes, small nose bridges, and a bulging forehead (e.g. Misty II), may evoke feelings of tenderness and caregiving, and elicit protection behaviors (Lv *et al.*, 2021). We believe that understanding customers' preferences and values for design features in AI concierges offers exciting research opportunities.

6.3.3 Privacy and ethics. Customer privacy concerns have garnered attention in interactions with various AI-based service agents, including chatbots and service robots (e.g. Cai *et al.*, 2024; Wirtz *et al.*, 2023b). The uniquely high level of interaction between customers and AI concierges in particular, coupled with the accessibility and utilization of sensitive personal data – encompassing locations, biometrics, preferences, behaviors, and credit cards – raises distinct privacy, ethical and safety concerns (Wirtz *et al.*, 2023b). Identifying the specific types of AI concierge interactions that trigger customer privacy concerns and elucidating strategies for fostering trust formation with AI concierges represent critical avenues for investigation.

Moreover, ethical considerations surrounding the relationships between AI concierges and customers warrant scrutiny, particularly concerning the phenomenon of AI hallucinations – wherein false ideas or information are generated (Christensen *et al.*, 2024). It is crucial to acknowledge the inherent imperfection of AI, rendering the complete elimination of hallucinations unfeasible. Overemphasizing AI advancements and fostering overreliance may pose substantial risks, endangering both individual brands and entire industries due to the potential for serious repercussions from misplaced trust.

In sum, we introduce in this article the concept of AI concierge and discuss how it can be leveraged to improve the customer journey. We hope that our article serves as a foundation for future academic discourse on this topic.

References

- Albright, L., Forest, C. and Reiser, K. (2001), "Acting, behaving, and the selfless basis of metaperception", *Journal of Personality and Social Psychology*, Vol. 81 No. 5, pp. 910-921, doi: [10.1037/0022-3514.81.5.910](https://doi.org/10.1037/0022-3514.81.5.910).
- Ambika, A., Shin, H. and Jain, V. (2023), "Immersive technologies and consumer behavior: a systematic review of two decades of research", *Australian Journal of Management*. Vol. 7, 03128962231181429, doi: [10.1177/03128962231181429](https://doi.org/10.1177/03128962231181429).
- Applegate, A. (2023), "Unreliable narrators: hallucinations may be causing your generative AI tools to lie to you", available at: <https://www.dnsfilter.com/blog/unreliable-narrators-hallucinations-may-be-causing-your-generative-ai-tools-to-lie-to-you> (accessed 14 February 2024).
- Borghini, M., Mariani, M.M., Vega, R.P. and Wirtz, J. (2023), "The impact of service robots on customer satisfaction online ratings: the moderating effects of rapport and contextual review factors", *Psychology and Marketing*, Vol. 40 No. 11, pp. 2355-2369, doi: [10.1002/mar.21903](https://doi.org/10.1002/mar.21903).
- Bornet, P., Barkin, I. and Wirtz, J. (2021), "Intelligent Automation: learn How to Harness Artificial Intelligence to Boost Business & Make Our World More Human", in *World Scientific Books*.
- Bryson, M. and Ziminski, A. (1992), *The Concierge: The Key to Hospitality*, John Wiley & Sons, New York.
- Cai, R., Wang, Y.C. and Sun, J. (2024), "Customers' intention to compliment and complain via AI-enabled platforms: a self-disclosure perspective", *International Journal of Hospitality Management*, Vol. 116, 103628, doi: [10.1016/j.ijhm.2023.103628](https://doi.org/10.1016/j.ijhm.2023.103628).

- Chan, Z., Kan, C., Lee, P., Chan, I. and Lam, J. (2012), "A systematic review of qualitative studies: patients' experiences of preoperative communication", *Journal of Clinical Nursing*, Vol. 21 Nos 5-6, pp. 812-824, doi: [10.1111/j.1365-2702.2011.03942.x](https://doi.org/10.1111/j.1365-2702.2011.03942.x).
- Chen, Q., Lu, Y., Gong, Y. and Xiong, J. (2023), "Can AI chatbots help retain customers? Impact of AI service quality on customer loyalty", *Internet Research*, Vol. 33 No. 6, pp. 2205-2243, doi: [10.1108/intr-09-2021-0686](https://doi.org/10.1108/intr-09-2021-0686).
- Choi, S., Liu, S.Q. and Mattila, A.S. (2019), "How may I help you? Says a robot: examining language styles in the service encounter", *International Journal of Hospitality Management*, Vol. 82, pp. 32-38, doi: [10.1016/j.ijhm.2019.03.026](https://doi.org/10.1016/j.ijhm.2019.03.026).
- Christensen, J., Hansen, J.M. and Wilson, P. (2024), "Understanding the role and impact of Generative Artificial Intelligence (AI) hallucination within consumers' tourism decision-making processes", *Current Issues in Tourism*, pp. 1-16, doi: [10.1080/13683500.2023.2300032](https://doi.org/10.1080/13683500.2023.2300032).
- Crolic, C., Thomaz, F., Hadi, R. and Stephen, A.T. (2022), "Blame the bot: anthropomorphism and anger in customer–chatbot interactions", *Journal of Marketing*, Vol. 86 No. 1, pp. 132-148, doi: [10.1177/002224292111045687](https://doi.org/10.1177/002224292111045687).
- De Keyser, A., Verleye, K., Lemon, K.N., Keiningham, T.L. and Klaus, P. (2020), "Moving the customer experience field forward: introducing the touchpoints, context, qualities (TCQ) nomenclature", *Journal of Service Research*, Vol. 23 No. 4, pp. 433-455, doi: [10.1177/1094670520928390](https://doi.org/10.1177/1094670520928390).
- Deb, S.K., Jain, R. and Deb, V. (2018), "Artificial intelligence—creating automated insights for customer relationship management", *IEEE 8th International Conference on Cloud Computing, Data Science & Engineering*, pp. 758-764, doi: [10.1109/confluence.2018.8442900](https://doi.org/10.1109/confluence.2018.8442900).
- Dirican, C. (2015), "The impacts of robotics, artificial intelligence on business and economics", *Procedia-Social and Behavioral Sciences*, Vol. 195, pp. 564-573, doi: [10.1016/j.sbspro.2015.06.134](https://doi.org/10.1016/j.sbspro.2015.06.134).
- Dwivedi, Y.K., Kshetri, N., Hughes, L., Slade, E.L., Jeyaraj, A., Kar, A.K., Baabdullah, A.M., Koohang, A., Raghavan, V., Ahuja, M. and Albanna, H. (2023), "So what if ChatGPT wrote it? Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy", *International Journal of Information Management*, Vol. 71, 102642, doi: [10.1016/j.ijinfomgt.2023.102642](https://doi.org/10.1016/j.ijinfomgt.2023.102642).
- Eyssel, F. and Hegel, F. (2012), "(S)he's got the look: gender stereotyping of robots", *Journal of Applied Social Psychology*, Vol. 42 No. 9, pp. 2213-2230, doi: [10.1111/j.1559-1816.2012.00937.x](https://doi.org/10.1111/j.1559-1816.2012.00937.x).
- Garvey, A.M., Kim, T. and Duhachek, A. (2023), "Bad news? Send an AI. Good news? Send a human", *Journal of Marketing*, Vol. 87 No. 1, pp. 10-25, doi: [10.1177/002224292111066972](https://doi.org/10.1177/002224292111066972).
- Gazzoli, G., Hancer, M. and Kim, B. (2013), "Explaining why employee-customer orientation influences customers' perceptions of the service encounter", *Journal of Service Management*, Vol. 24 No. 4, pp. 382-400, doi: [10.1108/josm-09-2012-0192](https://doi.org/10.1108/josm-09-2012-0192).
- Gray, K. and Wegner, D.M. (2012), "Feeling robots and human zombies: mind perception and the uncanny valley", *Cognition*, Vol. 125 No. 1, pp. 125-130, doi: [10.1016/j.cognition.2012.06.007](https://doi.org/10.1016/j.cognition.2012.06.007).
- Guo, Y. and Ayoun, B. (2022), "Starting a career during a global pandemic: telling stories of hospitality management graduates' decision making", *Journal of Hospitality and Tourism Education*, Vol. 34 No. 1, pp. 15-32, doi: [10.1080/10963758.2021.1963972](https://doi.org/10.1080/10963758.2021.1963972).
- Hermann, E. (2022), "Anthropomorphized artificial intelligence, attachment, and consumer behavior", *Marketing Letters*, Vol. 33 No. 1, pp. 157-162, doi: [10.1007/s11002-021-09587-3](https://doi.org/10.1007/s11002-021-09587-3).
- Hochman, D. (2018), "Robot butlers are taking over hotels (good news: no tipping required)", available at: www.forbes.com/sites/davidhochman/2018/02/23/robot-butlers-are-taking-over-hotels-goodnews-no-tipping-required/#67659b847636 (accessed 17 August 2023).
- Holmqvist, J., Wirtz, J. and Fritze, M.P. (2020), "Luxury in the digital age: a multi-actor service encounter perspective", *Journal of Business Research*, Vol. 121, pp. 747-756, doi: [10.1016/j.jbusres.2020.05.038](https://doi.org/10.1016/j.jbusres.2020.05.038).

- Holthöwer, J. and van Doorn, J. (2023), "Robots do not judge: service robots can alleviate embarrassment in service encounters", *Journal of the Academy of Marketing Science*, Vol. 51 No. 4, pp. 767-784, doi: [10.1007/s11747-022-00862-x](https://doi.org/10.1007/s11747-022-00862-x).
- Homburg, C., Müller, M. and Klarmann, M. (2011), "When does salespeople's customer orientation lead to customer loyalty? The differential effects of relational and functional customer orientation", *Journal of the Academy of Marketing Science*, Vol. 39 No. 6, pp. 795-812, doi: [10.1007/s11747-010-0220-7](https://doi.org/10.1007/s11747-010-0220-7).
- Hoyer, W.D., Kroschke, M., Schmitt, B., Kraume, K. and Shankar, V. (2020), "Transforming the customer experience through new technologies", *Journal of Interactive Marketing*, Vol. 51 No. 1, pp. 57-71, doi: [10.1016/j.intmar.2020.04.001](https://doi.org/10.1016/j.intmar.2020.04.001).
- Huang, H. and Liu, S.Q. (2020), "'Donate to help combat COVID-19!' How typeface affects the effectiveness of CSR marketing", *International Journal of Contemporary Hospitality Management*, Vol. 32 No. 10, pp. 3315-3333, doi: [10.1108/ijchm-05-2020-0462](https://doi.org/10.1108/ijchm-05-2020-0462).
- Huang, H. and Liu, S.Q. (2022), "Are consumers more attracted to restaurants featuring humanoid or non-humanoid service robots?", *International Journal of Hospitality Management*, Vol. 107, 103310, doi: [10.1016/j.ijhm.2022.103310](https://doi.org/10.1016/j.ijhm.2022.103310).
- Huang, M.H. and Rust, R.T. (2018), "Artificial intelligence in service", *Journal of Service Research*, Vol. 21 No. 2, pp. 155-172, doi: [10.1177/1094670517752459](https://doi.org/10.1177/1094670517752459).
- Huang, M.H. and Rust, R.T. (2021), "Engaged to a robot? The role of AI in service", *Journal of Service Research*, Vol. 24 No. 1, pp. 30-41, doi: [10.1177/1094670520902266](https://doi.org/10.1177/1094670520902266).
- Isen, A.M. (2001), "An influence of positive affect on decision making in complex situations: theoretical issues with practical implications", *Journal of Consumer Psychology*, Vol. 11 No. 2, pp. 75-85, doi: [10.1207/s15327663jcp1102_01](https://doi.org/10.1207/s15327663jcp1102_01).
- Ivanov, S.H. and Webster, C. (2017), "Adoption of robots, artificial intelligence and service automation by travel, tourism and hospitality companies—a cost-benefit analysis", *Artificial Intelligence and Service Automation by Travel, Tourism and Hospitality Companies—A Cost-Benefit Analysis*, available at: <https://ssrn.com/abstract=3007577> (accessed 17 August 2023).
- Jerger, C. and Wirtz, J. (2017), "Service employee responses to angry customer complaints: the roles of customer status and service climate", *Journal of Service Research*, Vol. 20 No. 4, pp. 362-378, doi: [10.1177/1094670517728339](https://doi.org/10.1177/1094670517728339).
- Jiang, K., Luk, S.T.K. and Cardinali, S. (2018), "The role of pre-consumption experience in perceived value of retailer brands: consumers' experience from emerging markets", *Journal of Business Research*, Vol. 86, pp. 374-385, doi: [10.1016/j.jbusres.2017.09.026](https://doi.org/10.1016/j.jbusres.2017.09.026).
- Joy, A., Zhu, Y., Peña, C. and Brouard, M. (2022), "Digital future of luxury brands: metaverse, digital fashion, and non-fungible tokens", *Strategic Change*, Vol. 31 No. 3, pp. 337-343, doi: [10.1002/jsc.2502](https://doi.org/10.1002/jsc.2502).
- Kim, S. (2017), "Robots ramp up room service at these hotels in Singapore", available at: www.scmp.com/magazines/style/travel-food/article/2119123/room-service-now-delivered-robotssingapore-hotels-jen (accessed 17 October 2023).
- Leíño Calleja, D., Schepers, J. and Nijssen, E.J. (2023), "Some agents are more similar than others: customer orientation of frontline robots and employees", *Journal of Service Management*, Vol. 34 No. 6, pp. 27-49, doi: [10.1108/josm-06-2022-0192](https://doi.org/10.1108/josm-06-2022-0192).
- Li, M., Yin, D., Qiu, H. and Bai, B. (2022), "Examining the effects of AI contactless services on customer psychological safety, perceived value, and hospitality service quality during the COVID-19 pandemic", *Journal of Hospitality Marketing and Management*, Vol. 31 No. 1, pp. 24-48, doi: [10.1080/19368623.2021.1934932](https://doi.org/10.1080/19368623.2021.1934932).
- Liu-Thompkins, Y., Okazaki, S. and 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*, Vol. 50 No. 6, pp. 1198-1218, doi: [10.1007/s11747-022-00892-5](https://doi.org/10.1007/s11747-022-00892-5).

- Lo, A., Wu, C. and Tsai, H. (2015), "The impact of service quality on positive consumption emotions in resort and hotel spa experiences", *Journal of Hospitality Marketing and Management*, Vol. 24 No. 2, pp. 155-179, doi: [10.1080/19368623.2014.885872](https://doi.org/10.1080/19368623.2014.885872).
- Loureiro, S.M.C. (2022), "Technology and luxury in tourism and hospitality", in Kotur, A.S. and Dixit, S.K. (Eds), *The Emerald Handbook of Luxury Management for Hospitality and Tourism*, Emerald Publishing, Bingley, pp. 273-284.
- Loureiro, S.M.C., Guerreiro, J. and Tussyadiah, I. (2021), "Artificial intelligence in business: state of the art and future research agenda", *Journal of Business Research*, Vol. 129, pp. 911-926, doi: [10.1016/j.jbusres.2020.11.001](https://doi.org/10.1016/j.jbusres.2020.11.001).
- Lu, V.N., Wirtz, J., Kunz, W.H., Paluch, S., Gruber, T., Martins, A. and Patterson, P.G. (2020), "Service robots, customers and service employees: what can we learn from the academic literature and where are the gaps?", *Journal of Service Theory and Practice*, Vol. 30 No. 3, pp. 361-391, doi: [10.1108/jstp-04-2019-0088](https://doi.org/10.1108/jstp-04-2019-0088).
- Lv, X., Liu, Y., Luo, J., Liu, Y. and Li, C. (2021), "Does a cute artificial intelligence assistant soften the blow? The impact of cuteness on customer tolerance of assistant service failure", *Annals of Tourism Research*, Vol. 87, 103114, doi: [10.1016/j.annals.2020.103114](https://doi.org/10.1016/j.annals.2020.103114).
- Mariani, M.M., Hashemi, N. and Wirtz, J. (2023), "Artificial intelligence empowered conversational agents: a systematic literature review and research agenda", *Journal of Business Research*, Vol. 161, 113838, doi: [10.1016/j.jbusres.2023.113838](https://doi.org/10.1016/j.jbusres.2023.113838).
- Mende, M., Scott, M.L., van Doorn, J., Grewal, D. and Shanks, I. (2019), "Service robots rising: how humanoid robots influence service experiences and elicit compensatory consumer responses", *Journal of Marketing Research*, Vol. 56 No. 4, pp. 535-556, doi: [10.1177/0022243718822827](https://doi.org/10.1177/0022243718822827).
- Mori, M., MacDorman, K.F. and Kageki, N. (2012), "The uncanny valley [from the field]", *IEEE Robotics and Automation Magazine*, Vol. 19 No. 2, pp. 98-100, doi: [10.1109/mra.2012.2192811](https://doi.org/10.1109/mra.2012.2192811).
- Nica, E., Sabie, O.M., Mascu, S. and Luțan, A.G. (2022), "Artificial intelligence decision-making in shopping patterns: consumer values, cognition, and attitudes. Economics", *Management and Financial Markets*, Vol. 17 No. 1, pp. 31-43.
- Pitardi, V., Wirtz, J., Paluch, S. and Kunz, W.H. (2021), "Service robots, agency and embarrassing service encounters", *Journal of Service Management*, Vol. 33 No. 2, Supp. 389, p. 414.
- Pitardi, V., Wirtz, J., Paluch, S. and Kunz, W.H. (2022), "Service robots, agency, and embarrassing service encounters", *Journal of Service Management*, Vol. 33 No. 5, pp. 389-414, doi: [10.1108/josm-12-2020-0435](https://doi.org/10.1108/josm-12-2020-0435).
- Pitardi, V., Wirtz, J., Paluch, S. and Kunz, W.H. (2024), "Metaperception benefits of service robots in uncomfortable service encounters", *Tourism Management*, Vol. 105, 104939, doi: [10.1016/j.tourman.2024.104939](https://doi.org/10.1016/j.tourman.2024.104939).
- Rana, J., Gaur, L., Singh, G., Awan, U. and Rasheed, M.I. (2022), "Reinforcing customer journey through artificial intelligence: a review and research agenda", *International Journal of Emerging Markets*, Vol. 17 No. 7, pp. 1738-1758, doi: [10.1108/ijoem-08-2021-1214](https://doi.org/10.1108/ijoem-08-2021-1214).
- Redditt, J., Orlowski, M., Fyall, A., Gregory, A.M. and Ro, H. (2022), "Determinants of customer satisfaction and eWOM in the sharing economy: timeshare versus peer-to-peer accommodations", *Tourism and Hospitality*, Vol. 3 No. 1, pp. 225-242, doi: [10.3390/tourhosp3010016](https://doi.org/10.3390/tourhosp3010016).
- Richter, R., Jansen, J., Bongaerts, I., Damman, O., Rademakers, J. and van der Weijden, T. (2023), "Communication of benefits and harms in shared decision making with patients with limited health literacy: a systematic review of risk communication strategies", *Patient Education and Counseling*, Vol. 116, 107944, doi: [10.1016/j.pec.2023.107944](https://doi.org/10.1016/j.pec.2023.107944).
- Robinson, S., Orsingher, C., Alkire, L., De Keyser, A., Giebelhausen, M., Papamichail, K.N., Shams, P. and Temerak, M.S. (2020), "Frontline encounters of the AI kind: an evolved service encounter framework", *Journal of Business Research*, Vol. 116, pp. 366-376, doi: [10.1016/j.jbusres.2019.08.038](https://doi.org/10.1016/j.jbusres.2019.08.038).

- Sands, S., Ferraro, C., Campbell, C. and Tsao, H.Y. (2021), "Managing the human–chatbot divide: how service scripts influence service experience", *Journal of Service Management*, Vol. 32 No. 2, pp. 246-264, doi: [10.1108/josm-06-2019-0203](https://doi.org/10.1108/josm-06-2019-0203).
- Sharma, K., Jain, M. and Dhir, S. (2021), "Analysing the impact of artificial intelligence on the competitiveness of tourism firms: a modified total interpretive structural modeling", *m-TISM) Approach*, Vol. 17 No. 4, pp. 1067-1084, doi: [10.1108/ijoem-05-2021-0810](https://doi.org/10.1108/ijoem-05-2021-0810).
- Shin, H.H. and Jeong, M. (2020), "Guests' perceptions of robot concierge and their adoption intentions", *International Journal of Contemporary Hospitality Management*, Vol. 32 No. 8, pp. 2613-2633, doi: [10.1108/ijchm-09-2019-0798](https://doi.org/10.1108/ijchm-09-2019-0798).
- Sivakumar, K., Li, M. and Dong, B. (2014), "Service quality: the impact of frequency, timing, proximity, and sequence of failures and delights", *Journal of Marketing*, Vol. 78 No. 1, pp. 41-58, doi: [10.1509/jm.12.0527](https://doi.org/10.1509/jm.12.0527).
- So, K.K.F., Kim, H., Liu, S.Q., Fang, X. and Wirtz, J. (2024), "Service robots: the dynamic effects of anthropomorphism and functional perceptions on consumers' responses", *European Journal of Marketing*, Vol. 58 No. 1, pp. 1-32, doi: [10.1108/ejm-03-2022-0176](https://doi.org/10.1108/ejm-03-2022-0176).
- Sumner, M. and Quinn, B. (2017), "From concierge to superman: perceptions of the contemporary hotel concierge in Edinburgh", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 11 No. 2, pp. 243-254, doi: [10.1108/ijcthr-03-2016-0030](https://doi.org/10.1108/ijcthr-03-2016-0030).
- Tewari, A. (2021), "How does natural language processing apply to IoT?", available at: <https://insights2techinfo.com/how-does-natural-language-processing-apply-to-iot> (accessed 14 August 2023).
- The Economist (2023), "Customer service is getting worse—and so are customers", available at: <https://link-gale-com.proxy.lib.ohio-state.edu/apps/doc/A766909726/AONE?u=colu44332&sid=oclc&xid=4d0d3df2> (accessed 7 February 2024).
- Voorhees, C.M., Fombelle, P.W., Gregoire, Y., Bone, S., Gustafsson, A., Sousa, R. and Walkowiak, T. (2017), "Service encounters, experiences and the customer journey: defining the field and a call to expand our lens", *Journal of Business Research*, Vol. 79, pp. 269-280, doi: [10.1016/j.jbusres.2017.04.014](https://doi.org/10.1016/j.jbusres.2017.04.014).
- Waytz, A., Heafner, J. and Epley, N. (2014), "The mind in the machine: anthropomorphism increases trust in an autonomous vehicle", *Journal of Experimental Social Psychology*, Vol. 52, pp. 113-117, doi: [10.1016/j.jesp.2014.01.005](https://doi.org/10.1016/j.jesp.2014.01.005).
- Winkler, A., Kutschar, P., Pitzer, S., van der Zee-Neuen, A., Kerner, S., Osterbrink, J. and Krutter, S. (2023), "Avatar and virtual agent-assisted telecare for patients in their homes: a scoping review", *Journal of Telemedicine and Telecare*, 1357633X2311744, doi: [10.1177/1357633x231174484](https://doi.org/10.1177/1357633x231174484).
- Wirtz, J., Patterson, P.G., Kunz, W.H., Gruber, T., Lu, V.N., Paluch, S. and Martins, A. (2018), "Brave new world: service robots in the frontline", *Journal of Service Management*, Vol. 29 No. 5, pp. 907-931, doi: [10.1108/josm-04-2018-0119](https://doi.org/10.1108/josm-04-2018-0119).
- Wirtz, J., Hofmeister, J., Chew, P.Y. and Ding, X.D. (2023a), "Digital service technologies, service robots, AI, and the strategic pathways to cost-effective service excellence", *The Service Industries Journal*, Vol. 43 Nos 15-16, pp. 1173-1196, doi: [10.1080/02642069.2023.2226596](https://doi.org/10.1080/02642069.2023.2226596).
- Wirtz, J., Kunz, W.H., Hartley, N. and Tarbit, J. (2023b), "Corporate digital responsibility in service firms and their ecosystems", *Journal of Service Research*, Vol. 26 No. 2, pp. 173-190, doi: [10.1177/10946705221130467](https://doi.org/10.1177/10946705221130467).
- Wood, S. and Schulman, K. (2019), "The doctor-of-the-future is in: patient responses to disruptive health-care innovations", *Journal of the Association for Consumer Research*, Vol. 195 No. 3, pp. 231-243, doi: [10.1086/704106](https://doi.org/10.1086/704106).
- Yalcin, G., Lim, S., Puntoni, S. and van Osselaer, S.M. (2022), "Thumbs up or down: consumer reactions to decisions by algorithms versus humans", *Journal of Marketing Research*, Vol. 59 No. 4, pp. 696-717, doi: [10.1177/00222437211070016](https://doi.org/10.1177/00222437211070016).

Further reading

- Bedué, P. and Fritzsche, A. (2022), "Can we trust AI? An empirical investigation of trust requirements and guide to successful AI adoption", *Journal of Enterprise Information Management*, Vol. 35 No. 2, pp. 530-549, doi: [10.1108/jeim-06-2020-0233](https://doi.org/10.1108/jeim-06-2020-0233).
- Eisingerich, A.B. and Bell, S.J. (2008), "Perceived service quality and customer trust: does enhancing customers' service knowledge matter?", *Journal of Service Research*, Vol. 10 No. 3, pp. 256-268, doi: [10.1177/1094670507310769](https://doi.org/10.1177/1094670507310769).
- Huang, H., Liu, S.Q. and Lu, Z. (2023), "When and why language assertiveness affects online review persuasion", *Journal of Hospitality and Tourism Research*, Vol. 47 No. 6, pp. 988-1016, doi: [10.1177/10963480221074280](https://doi.org/10.1177/10963480221074280).
- Lasarov, W., Orth, U.R., Wirtz, J. and Holm, M. (2023), "Exploring the nonlinear influence of nonverbal dominance in marketing communicators: instrumental outcomes, social outcomes, and persuasion", *Journal of Business Research*, Vol. 168, 114201, doi: [10.1016/j.jbusres.2023.114201](https://doi.org/10.1016/j.jbusres.2023.114201).
- Liu, S.Q., Choi, S. and Mattila, A.S. (2019), "Love is in the menu: leveraging healthy restaurant brands with handwritten typeface", *Journal of Business Research*, Vol. 98, pp. 289-298, doi: [10.1016/j.jbusres.2019.02.022](https://doi.org/10.1016/j.jbusres.2019.02.022).
- Lv, X., Yang, Y., Qin, D., Cao, X. and Xu, H. (2022), "Artificial intelligence service recovery: the role of empathic response in hospitality customers' continuous usage intention", *Computers in Human Behavior*, Vol. 126, 106993, doi: [10.1016/j.chb.2021.106993](https://doi.org/10.1016/j.chb.2021.106993).
- Packard, G. and Berger, J. (2021), "How concrete language shapes customer satisfaction", *Journal of Consumer Research*, Vol. 47 No. 5, pp. 787-806, doi: [10.1093/jcr/ucaa038](https://doi.org/10.1093/jcr/ucaa038).

Corresponding author

Chunhao(Victor) Wei can be contacted at: chunhaowei@outlook.com

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com