Smart hotels but not necessarily smart decisions: the smartness paradox

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Abstract
Purpose – This paper aims to answer questions pertinent to whether or not services provided by smart hotels are really what customers are looking for, as well as to ascertain what are some unintended experiences guests may encounter. In essence, to the best of the authors’ knowledge, this research is the first in the field to acknowledge the paradox of smart service.

Design/methodology/approach – This inquiry adopts a qualitative approach with data-driven from online customer reviews and semistructured interviews. Thematic analysis was undertaken to interpret review comments.

Findings – Results point to a new phenomenon, which is coined as the smartness paradox. In particular, customers on one hand enjoy an array of smart-infused experiences that jointly offer patrons a sense of a futuristic lifestyle. On the other hand, smart devices superimpose a number of hindrances that bring guests dismay and annoyance.

Research limitations/implications – This investigation brings smart service failure to the fore to highlight several key failure themes that could jeopardize the entire operation with debased customers’ satisfaction and loyalty inclination.

Originality/value – The smartness-paradox framework used in the present inquiry entails both approach and avoidance consequences customers enact depending on their smart experiences.

Keywords Smart service, Artificial intelligence, Robot, Experience, Futuristic lifestyle

Paper type Research paper

Introduction
Are smart services really error free? Can smart hotels live up to their service guarantee and patrons’ expectations? Recent anecdotal evidence suggests that smart services are not
bulletproof, but rather error-prone (Castillo et al., 2021). On one hand, AI-related procedures could cause service failure and hence, customer complaints (Choi et al., 2021; Castillo et al., 2021); while on the other hand, AI and robotic services have created an array of challenges for employees (Fu et al., 2022). Fu et al. refer to this phenomenon as a peril of technology, noting the dark side of robotic usage in smart hotels. These outcomes are somewhat contrary to the definition of smart services, touted as “personalized and pro-active services that are enabled by the integrated technology and intelligent use of data that can anticipate and fulfill customer needs at specific time and/or locations based on changing customer feedback and circumstances” (Kabadayi et al., 2019: p. 330). Although prior efforts are encouraging, they are either confined within specific experiential conditions that may not reflect the complex dynamics in the everyday service encounter (Choi et al., 2021; Ho et al., 2020; Arikan et al., 2023), or the research focuses on the employee and operational domains without inputs from real customers (Fu et al., 2022).

In fact, while the aforementioned literature is insightful and sets the necessary foundation for understanding smart experience and service, a clear limitation is evident as most studies focus on the positive side of smartness, while a balanced approach has not been documented. Accordingly, the present research aims to fill the aforementioned void in the literature by exploring favorable and unfavorable smart service experiences customers encounter in smart hotels. This study seeks to answer the questions pertinent to whether or not services provided by smart hotels are really what customers are looking for, as well as to ascertain what are some unintended experiences guests may encounter. A qualitative design was used with data-driven from both online customer reviews and semistructured interviews.

This research contributes to the literature by contemplating multiple paradoxes that patrons face in smart establishments. This phenomenon is coined as the smartness paradox, which unlocks the paradoxical view of smart technology. On one hand, positive smart experiences foretell a future lifestyle that customers have an affinity with, hence creating a desire to restay at such smart facilities. They thus add new nuances to Pine and Gilmore’s (1998) experience paradigm by showcasing an array of favorable smart experiences (e.g. s-escape, s-entertainment, s-education, s-esthetic, s-protection and s-futuristic lifestyle). On the other hand, adverse experiences lead to regret and hence, avoidance and rejection of future patronage. This view challenges the taken-for-granted understanding about smart services that by and large entail positive connotations (Gonçalves et al., 2020; Kabadayi et al., 2019; Yang et al., 2021; Law et al., 2022), while advising caution that businesses should not merely follow the smartness bandwagon, and highlighting dilemmas customers face during the smart service encounters.

In addition, this inquiry seeks to resolve the double edge sword effect of technology (Zhani et al., 2021) by identifying new paradoxical challenges pertinent to smart services. It extends the experience scholarship to create new dialogues about various smart-experiential themes to better highlight patrons’ approach and avoidance behaviors. Importantly, it hints at the transformative role of smart services in allowing guests a glimpse into futuristic human living. Thus the inquiry answers Sheldon’s (2020) call for transformative tourism that can bridge present and future lifestyles. It further underscores key smartness failures, themes that could bring invaluable knowledge to the field to better understand what lies behind factors that hinder the success of smart hospitality services.

**Theoretical background**

*Smart service and hotel*

Smart service differs from mere AI-based service. According to Kabadayi et al. (2019: 328) smart services denote “collection, integration, analysis and concreted use of general and specific customer information through connected and synchronized technologies to enrich
and personalize customer experience.” Such services include an array of intelligent devices designed to improve customer satisfaction and bring delight; these include robot-related apparatuses and butler services, smart mirrors, autonomous lighting and sound control system, self-service order platform, facial and voice recognition, fingerprint authentication and more (Kabadayi et al., 2019; Wirtz et al., 2018). In regard to smart hotels, Jaremen et al. (2016) refer to them as properties that implement information and communication technologies (ICTs) to increase efficiency in guest service provisions and hotel management. For instance, online room booking and baggage pickup services powered by mobile devices can provide guests a convenient experience before they arrive (Law et al., 2022). Smart rooms with touch screen panels and robots (e.g. chat bots, delivery bots and cleaning bots) offer guests personalized and humanized experience during their stay (Zhong et al., 2020). Other technologies can provide guests with efficiency and a hassle-free experience during hotel departure (Kim and Han, 2020).

The emergence of new technologies, such as virtual reality (VR) allow guests to immerse themselves in a fantasy world via virtual tours even prior to their hotel stay (Li et al., 2024). In addition, new technologies are capable of linking a property with external resources, such as tourist attractions, shopping malls, restaurants and more. Such connectivity thus enables more complete, convenient, comfortable and personalized services (Kim and Han, 2020). The list of benefits reaped from advanced technology is not exclusive, as innovative devices continue to disrupt the industry and bring new experiences to customers (Wirtz et al., 2018).

Frustration, regret, resistance and avoidance of technology
New technologies are not always welcome, especially for those taking vacations, as tourists seek relaxation and escapism (Rosenbaum and Wong, 2015). Also, people may feel stressful with innovations because they require users to make changes to the status quo (Laumer et al., 2016). An individual’s opposition to adopt new technologies is commonly characterized as technology resistance or avoidance (Alohali et al., 2018). Consistent with the essence of the cost-benefit perspective, users evaluate change by determining the benefits of switching against its drawbacks. That is, if users perceived scant benefits offered by the usage of a new technology (e.g. the value gained is not worth the cost), they would resist using such an innovation (Chang et al., 2019).

As Alohali et al. (2020) point out, users of technologies expect reliability, accuracy, assurance and empathy; hence, users would reject those innovations that are slow, of low quality or unreliable; or that omit the requests of users while offering limited personal attention. Other than the aforementioned functional deficit, some scholars emphasize user-oriented characteristics such as past experience, degree of expectations and personal traits (Fong et al., 2017). As existing studies suggest, users with lower levels of techno-related knowledge may have lower usage intentions; or their experience will be hampered in other ways (Aggarwal et al., 2015). Frustration caused by difficulty in operating new technologies can bring annoyances to users. Meanwhile, in contrast to the technology acceptance model, several scholars have improvised models pertinent to technology resistance (Fu et al., 2022) to acknowledge reasons why people reject using advanced devices; including techno-stress (Fu et al., 2022), perceived threat, perceived risks (e.g. privacy, financial, performance, psychology and time) and privacy concerns (e.g. Hu and Min, 2023).

Negative encounters using technology may trigger a sense of dismay and regret (Shih and Schau, 2011). Regret theory further points to how people experience negative emotional valence after experiencing undesirable events. Such events could reflect techno-stress and interference brought about by the usage of technology. These unfavorable instances could
transform technology into a means of social isolation, as users are secluded from human interactions; or as Lawson (2017: ix) contends, “More technology means more isolation.” Such feelings of interference and isolation brought about by technology could ultimately lead to regretfulness and avoidance behaviors (Shih and Schau, 2011).

Technology and customer experience
In the present era of Web 3.0, consumers are in constant pursuit of technology-infused extraordinary experiences that could arouse their five senses (Arikan et al., 2023; Bagozzi et al., 2022; Pelet et al., 2021). The seminal idea of experience-dominated economic activities was proposed by Pine and Gilmore (1998), who crafted the concept of the experience economy. In such an environment, experience can be reaped from four realms: educational, escapist, esthetic, entertainment. These four experiential elements are juxtaposed along two dimensions: participation (passive vs active) and connecting desire (absorption vs immersion). A commercial third place (e.g. restaurant, gym, hotel and attraction) can provide customers with an educational experience as they interact with the service providers to acquaint new knowledge during the service delivery process (Lu et al., 2021; Oh et al., 2007). The place can offer customers an escape experience, as people constantly seek opportunities to withdraw from their mundane daily life (Ji et al., 2018). Escapist experiences reflect active participation with a desire to become immersed in an unusual environment (Lin et al., 2022). Esthetic experience points to passive indulgence of the service, in that customers immerse themselves in the place by viewing its artifacts, décor, architectural magnificence and more (Wong et al., 2023). Entertainment experience reflects hedonic elements that could entice patrons with arousal and satiation (Luo et al., 2020). In fact, services provided today often pivot onto amusement like activities that prolong customers' memories and fill their hearts with elation (Wen et al., 2021).

Gonçalves et al. (2020) propose a multidimensional model of smart service experience for energy-consuming goods that comprises of three primary pillars. The first is the service dimension, which reflects customer preference and experience regarding controllability, visibility (e.g. vividly displaying service performance) and autonomy. The second pillar rests on the relationship dimension, with respect to building better social ties with the provider and the community. The last pillar is germane to technology-mediated functionalities such as accessibility and ease of usage. In essence, people have a tendency to crave a futuristic lifestyle, and technology is able to fill their need in that regard, as it often conjures a sense of innovation and the future (Hanafizadeh et al., 2017). Although the aforementioned literature is insightful and sets the necessary foundation for research on smart experience and service, a clear limitation is evident, as most studies focus on the positive side of smartness, while a balanced approach has not been documented.

Methods
Research approach
Given that scarce research has pivoted on how guests perceive their experiences at smart hotels, this inquiry adopted a qualitative approach to unveil a social phenomenon which we refer as the smartness paradox. Two phases of data collection were conducted, with Phase 1 using online reviews with data derived from Ctrip – an online travel platform featuring hybrid functions for tourists to obtain travel-related information, undertake bookings and disseminate their travel experiences. Notably, online reviews have been increasingly vital for operators in channelizing resources for service improvement; they also have presented researchers with large volumes of data concerning smart hotel experiences. We further conducted Phase 2 using semistructured interviews, with the combination of online reviews...
and interviews not only increasing the trustworthiness of the findings but also deepening the understanding of the smart hotel paradox (Wong et al., 2022a, 2022b). Accordingly, this approach afforded the researchers an opportunity to gain more profound insights into the viewpoints and experiences of the interviewees concerning the central subject of our research, which revolves around the realm of experiences within smart hotels. The interview questions primarily concentrated on guests’ encounters within smart hotels. Our objective was to gain a comprehensive comprehension of how patrons perceive their encounters in smart hotels, encompassing both positive and adverse consequences entailed by the utilization of intelligent technological services. Details about the interview protocol can be found in Appendix 1. The flow of the overall research method is presented in Appendix 2 Figure A1.

Research context
Six smart hotels were sampled, including Hotel Kapok Shenzhen, Leyizhu Wuren Smart Hotels (at Shenzhen Dongmen, Dongmen Old Street, Yantian Shatoujiao and Bagualing Metro Station) and FlyZoo Hotel. They were selected given that they were widely reported as smart service innovators in the hotel business, while they were located within the two most advanced smart cities in China, including Shenzhen and Hangzhou (Earth.org, 2023). These hotels were selected also because they were renowned in social media as innovative hotels equipped with many smart technologies. In fact, these hotels were widely equipped with state-of-the-art technology-mediated services, offering a vast constellation of high-tech attributes embedded in the majority of the hotel touch points. For example, FlyZoo Hotel featured facial recognition doors and elevators, robotic butlers, a voice command smart assistant (e.g. Tmall Genie) to enable guests to control in-room amenities, a VR showroom and a voice activated order system (CNBC, 2019).

Data collection and sampling
Data collection for Phase 1 was undertaken in early 2021, with review comments covering from 2018 to 2020. Specifically, we relied primarily on the Web scraper to secure our data, resulting in the capture of 4,900 customer reviews. We then carefully read through the data corpus to screen out repetitive comments as well as those composed of shortened expressions. For example, customer reviews such as “excellent service” and “awesome experience” without a rich description of the smart hotel experience were excluded. The data corpus comprised 70,077 words from 1,034 reviews, providing researchers with ample details pertinent to the smart hotel experience.

Data collection for Phase 2 was conducted in August 2023. Interviewees were chosen according to two specific prerequisites. First, they were required to be above 18 years old. Second, they were mandated to have experienced the selected smart hotels. Interviews were undertaken onsite at two hotels (e.g. Hotel Kapok Shenzhen and FlyZoo Hotel), with participants recruited from various areas within the hotel premises, such as the lobby, bar, restaurant and fitness center. Twenty-two interviews were conducted, each spanning an average duration of approximately 20 min. Detailed demographic profiles of the interviewees are presented in Appendix 3 Table A1.

Data analysis
Thematic analysis was used to interpret review comments and interview data. The analysis, catering primarily to identifying themes from a volume of data, enabled the researchers to develop major themes concerning the smart hotel experience. It required coders to repeatedly read through the data corpus, followed by systematic coding to accentuate “what
the participants have to say about the research topic” (Morgan and Hoffman, 2018: 259). We also referred to the existing literature on the experience economy, such as Pine and Gilmore’s (1998) and other aforementioned smart service studies (e.g. Kabadayi et al., 2019; Fu et al., 2022; Wirtz et al., 2018), to guide our data analysis. However, as the coding process progressed, it was clear to the authors that the phenomenon of interest goes beyond Pine and Gilmore’s paradigm and the existing literature with new themes that can enhance the experience literature. To further assist the coding process, findings from Phase 1 were used to inform the codes.

It is also worth noting that we relied on manual coding to undertake the following emergent coding. First, we conducted initial coding to thoroughly examine the data corpus line by line. One coder, who led the coding scheme, worked on initial codes. This cycle was designed to maintain a general direction of the inquiry to unfold meanings behind each review comment and interview transcript (Saldaña, 2009). For instance, initial codes such as *convenience* were developed when guests mentioned ease of accessibility of services (e.g. “Check-in in this smart hotel was faster and more convenient than traditional hotels with a front desk”). Contrarily, the code *difficult to use* was presented with reviews such as “It was too tiring to use high-tech facilities since there were not many instructions showing how facilities should be used.”

The coder then undertook the second cycle coding (namely, axial coding), to systematically reassemble initial codes with shared features and similar meanings into categories and themes (Saldaña, 2009). For example, the initial codes “elegance” and “sense of stylish” were merged as “sense of fashion.” Furthermore, “sense of fashion” was integrated with other similar categories such as “sense of technology” and “sense of modernity” to comprise the *hotel design* category under the *smart (S)-esthetic* theme. The emergent themes were cross-validated by another coder who is senior and more knowledgeable in researching smart services. More details on categories and themes are presented in Appendix 4 Table A2. Selective coding was followed to connect categories (both positive and negative experiences) to form the core category, smartness paradox, by the two coders [1].

Trustworthiness was established through data triangulation, investigator triangulation and peer debriefing. Specifically, data from two sources provide evidence that the findings are fairly consistent, regardless of the time lag in data collection. Also, online reviews and interview data largely support the proposed framework of the smartness paradox of smart hotel experience. Detailed data triangulation is evident by quotes exhibited in the findings section. For investigator triangulation, a senior researcher supervised the lead coder throughout the coding process to provide coding comments and validate research findings. The results were developed as two coders constantly exchanged opinions on initial codes, categories and themes. Coders also compared the findings with prior research on the experience economy (Pine and Gilmore, 1998) and other smart service literature (e.g. Kabadayi et al., 2019; Gonçalves et al., 2020; Fu et al., 2022; Wong et al., 2022a, 2022b). An independent scholar proficient in qualitative inquiries later participated in data analysis, serving as the peer debriefer by commenting on the coding process and research findings. The resulting themes and categories are detailed in the section below.

**Findings**

Findings from Study 1 reveal two constellations of the smart hotel experience, with *S-esthetic*, *S-escapism*, *S-entertainment*, *S-education*, *S-protection* and *S-futuristic lifestyle* classified as favorable experiences. Here “S” refers to smart infusion (or simply smart) to notion the smart technology-mediated experience customers acquired in the service delivery
(Kabadayi et al., 2019). On the contrary, unfavorable experiences such as S-interference, S-isolation and S-regretfulness were also identified. Each experience theme entails two categories.

A close examination of online reviews suggest that S-futuristic lifestyle has the highest frequency, comprising 332 reviews tapping into this experience (see Appendix 5 Table A3). S-esthetic (184 reviews), S-escapism (172 reviews) and S-regretfulness (156 reviews) are among the frequently reported experiences, whereas S-isolation (56 reviews) and S-protection (54 reviews) are the least noted experiences in the online reviews. The frequency of each theme and category is presented in Appendix 5 Table A3.

S-esthetic

One prominent experience sought from hotel stays is the esthetic experience mediated through smart technology (Papagiannidis and Davlembayeva, 2021). It is incorporated into the hotel experiencescape and denotes an immersive hotel design and ambiance. Esthetic experience is increasingly desirable in a smart hotel stay (Wong et al., 2023), as it pivots on immersing in the smart hotel service environment enjoyably without deliberately altering smart environmental appeals (Oh et al., 2007). This notion suggests that the esthetic experience concerns passive appreciation and influence by the visual effect of smart environmental attributes on the human senses (Papagiannidis and Davlembayeva, 2021). Our findings indicate that smart hotels presented guests with such experiences through two major appeals: hotel facility and hotel design. The former centers around the visual effect of a specific smart technology embedded in the hotel service encounter, whereas the latter comprises smart hotels' overall designs, styles and outlooks.

Importantly, although some customers commented on the esthetic value of a particular technological application, the majority asserted that the esthetic experience was shaped in concert by multiple smart apparatuses. Particularly, given that advanced technology embedded in the smart hotel service encounter commonly represents futuristic designs and functions that are substantially different from traditional ones, such differences can easily transform into esthetic appeals (Wong et al., 2023). In this way, specific smart service attributes can create a sense of modernity and futurism through state-to-the-art technological devices equipped with abundant encounters of the hotel services. For example, a customer claimed:

What a high-tech bathroom. It is very comfortable with a glass mirror, entailing a built-in touch screen LED. It is also equipped with LeTV somatosensory gun. These technological applications furnish a sense of innovation (#A53).

Another guest also pointed out, “I think these creative touches are pretty neat. They give off a nice techy vibe and avoid the typical feel of traditional hotels” (Interviewee #01).

Customers also derived esthetic value from smart hotels' overall designs including styles and outlooks. The overall design comprises multiple smart technologies jointly shaping the esthetic appearance of smart hotels. Also, similar to specific smart service appeals, customers were inclined to portray these qualities as contemporary and fashionable. For example, interviewee #22 remarked that “the large LED screen at the entrance is extremely futuristic, and the overall decoration style of this hotel is very modern, especially the polygon hollow design used in the room, which reflects a strong sense of technology.”

S-escapism

Escapism is a vital experience absorbed from smart service encounters. The experience can be mainly attributed to the fact that smart services feature dissimilar functions from
traditional services and hence, they allow customers to escape from daily routine and ordinary services (Wong et al., 2022a, 2022b). Our findings suggest that smart hotels provide customers with mental and spatial escape opportunities. Mental escape concerns temporarily setting time apart from one’s busy schedule to spend time on leisure activities. For example, Interviewee #12 stated, “The gym is clean, tidy, and equipped with modern gear. I feel like I’ve had a great relaxation experience here – despite being in the midst of the city buzz, it’s like I’ve found a sense of inner peace.”

Spatial escape focuses on physical distancing from usual places to immerse oneself in a novel environment decorated with smart appeals (Wong et al., 2022a, 2022b). It underscores experiencing a newfangled space through sensory arousal. Findings indicate that staying in a smart environment with advanced technological appeals brings customers a sense of freshness and novelty, which suffices as a spatial escape from their mundane habitat. For example, #F168 remarked, the hotel environment is fascinating while the whole experience is novel. It is so good to take children to play in such a setting. It feels like living in an aquarium.

**S-entertainment**

Prior research has also recognized that smart service settings feature experiences catering to entertainment (Odekerken-Schröder et al., 2022). Essential in appealing to customers with hedonic attributes, entertainment is increasingly sought in the service setting, as such customers are looking for amusement that could make their memories last (Pine and Gilmore, 1998). For example, Odekerken-Schröder et al. (2022) suggest that smart services present customers with entertainment and fun through interactions with devices having smart appeals.

Our findings unveil two types of experiences germane to entertainment: operational and functional entertaining experiences. Operational entertaining experiences pertain to interactively operating smart technologies, particularly ones that prompt elated interactions to accommodate customers’ need for curiosity and emotional arousal. These experiences can be impelled by personalized services since smart technology can easily tempt customer interest and attention during operation (Wong et al., 2022a, 2022b). Marked difference differentiates smart settings from conventional ones, to transcend what was supposed to be an ordinary encounter into an extraordinary experience. For instance, a customer noted, “The hotel [has a] fully intelligent check-in system. The robot also accompanies us to the room and opens the door for us. It is an enjoyable experience” (#D200). In a similar vein, guest #B37 also appraised that hotel service robots were fun to play with.

In contrast, functional entertaining experiences emphasize the delivery of amusements through smart devices (Papagiannidis and Davlembayeva, 2021). Some hotels decided to equip their rooms and open areas with intelligent apparatuses that aim to offer guests entertainment elements, which can ultimately translate into joyous experience that guests desire. For example, video games that are paired with shooting guns are likely to induce a completely immersive experience. Both functional and operational entertainment facilities have transformed a hotel into a gamification showroom.

**S-education**

Smart technologies cater well to the need for educational experiences. The educational experience embodies active participation in which guests absorb learning ingredients embedded in intelligent devices. Review comments demonstrate that customers obtained two types of educational experiences from smart hotel stays, including product-related education and business environment-related education.
Product-related education denotes learning opportunities prompted when one encounters smart technologies dissimilar from conventional services. Although it might not be possible to fully comprehend the operation of specific smart service devices during a short hotel stay, brief operating encounters afford customers a glance at how smart technologies operate differently than traditional ones. For instance, one customer noted “smart products everywhere [in this hotel]. This is educational and eye opening” (#F17).

On the contrary, business environment-related education is prompted when customers think about how smart hotels are different from traditional hotel operations; such cognitive processing of this new existence of accommodation shapes customers’ awareness and knowledge of the high-tech emerging trend during their stays (Pelet et al., 2021). For example, a reviews claimed that “The check-in process is expedited in smart hotels and such technology advancement brings challenges to the traditional hoteliers as they are facing rapidly changing customer behaviors” (#C31).

**S-protection**

*Protection experience* is becoming an increasing concern in smart services (Gonçalves et al., 2020). Findings point to two core protection areas: *psychological protection* and *physical protection*. We refer to psychological protection as guests’ experiences that accommodate psychological needs for privacy and personal space. Privacy and personal space intrusion often result in discomfort and distress (Papagiannidis and Davlembayeva, 2021). Yet smart hotels present an oasis to alleviate these issues, as these properties are commonly occupied with limited personnel, resulting in reduction of excessive employee service encounters that might trigger privacy concerns. This point, as illustrated in the comments below, suggests that customers obtained a sense of privacy protection during automatically intelligent service encounters. For example:

“I feel privacy protected during check-in, as it is full of automation. (#C211)

Using robots to deliver items can also do a great job of safeguarding customer privacy. (Interviewee #02)

Physiologically, smart hotels provide physical security solutions to prevent privacy violations. Findings indicate that some smart hotels adopted strict access protocols, with each room door equipped with unique passwords sent solely to the guests’ mobile phones. This approach avoids the danger of others breaking in. For example, Interviewee #15 acknowledged that “I feel that this [face recognition access control] is more reassuring than the room card and key, which are easy to lose. But face recognition has always been available, and I don’t worry about other people coming into the room.”

**S-futuristic lifestyle**

Customers are often compelled to seek enhanced experiences, particularly in the context of tech driven services (Kabadayi et al., 2019). The prevalence of smart services suggests that we are leaping forward to a *futuristic lifestyle*. In this study, futuristic lifestyle refers to the pursuit of an ideal style of living, which centers primarily on experiencing high-quality and high-efficiency services that transform mundane daily routines into a lifestyle that is full of extraordinary encounters. In this regard, findings suggest that refinement entails *high-quality experience* and *high-efficiency experience*.

In the eyes of customers, smart technology represents a new lifestyle and a symbol of futurization and the pursuit of high-quality (Wong et al., 2022a, 2022b) services that offer guests enjoyment through a comfortable stay. For example, one customer noted, “It is a
state-of-the-art experience with face scanning technology that makes virtually all services available through recognition of me” (#E178). Similarly, #B38 wrote:

The hotel highly integrates intelligent technology with the booking, check-in and check-out processes. Technological attributes such as robot attendance and face recognition can bring me new excitement to my journey with a hassle-free, safe, and comfortable hotel stay.

The high-end hotel experience is also exemplified as smart technologies provide intelligently humanized service solutions ranging from automatic lighting and blinds to intelligent-based air conditioning and temperature control. Guest reviews exhibit that customers were amazed by such high-quality experiences that brought them a new lifestyle. For example, a guest commented that:

It is highly tech-driven. It is like someone is taking care of customers with lights and air-conditioning automatically operating when entering the room. The in-room temperature is also adjusted based on the outdoor temperature. What a fabulous stay! (#C15).

The perception and anticipation of this high-quality lifestyle do not just fade away after checking out. Instead, this experience opens up possibilities for a smarter life ahead. For instance, one guest mentioned:

I actually felt a better quality of life in this room. It got me thinking that when I renovate my own home in the future, I’d like to get similar smart toilets, lighting systems and other elements. (Interviewee #01)

Smart technologies have also been widely credited for boosting service efficiency (Gonçalves et al., 2020). High-efficiency experience is characterized as the experience of reduced unnecessary touch points, with prompt, responsive and automatic services. For example, the self-service check-in kiosk enables guests to gain full command over the service experience, with a speedy registration process. The scenario above points to the importance of efficient smart services that differ from conventional ones. As customers continued to comment, they highly praised such efficient encounters fostered by smart intelligence. One guest reported, “The whole process is highly intelligent. From hotel check-in to room authentication, smart technologies make everything easy. It is really a pleasure” (#E152).

S-interference

Although our findings have predominantly highlighted favorable experiences acquired from smart hotel stays, a number of commentaries suggest a paradoxical view of the smart hotel experience. For example, customers’ grievances point to interference, referring to the experience of getting bothered and interrupted by smart devises, especially when these smart nuances work less efficiently and predictably than their conventional counterparts. Interference is a typical smart service failure in that effective recovery is urged (Choi et al., 2021), contradicting the promise of futuristic lifestyle experience identified above. This experiential attribute entails sensory interference and emotional interference.

Findings indicate that sensory interference is induced when smart services bring about disturbing experiences to the human sensory system, particularly in regard to sight and hearing. Indeed, although the terms “smart” or “intelligence” often convey personalized services that are desirable, such technology can backfire by creating uncontrollable and unwanted situations that could result in great annoyances to guests. For example, one customer wrote, “The toilet pumped every few minutes […]. That is insane!” (#C10). Similarly, #D142 claimed, “The automatic sensor light is not very user-friendly and cannot be controlled manually, especially during the middle of the night.” Moreover, new
technologies require human cognitive resources to learn the appropriate operating procedures, which might require customers to have a great deal of patience when they need the service immediately, as the following comment exhibits: “The so-called self-service machine on the first floor still cannot recognize the ID card under the guidance of the waiter!” (#F114).

The comments above suggest the downside of smart services to guests, leading to service inefficiency and failure. In contrast, emotional interference concerns consternation (e.g. panic and fright) brought about by dysfunctional smart technologies, mainly when these incidents occur unexpectedly. For example, the toilet lid suddenly opened when guests entered the washroom, causing the guests a huge shock and trepidation. This incident was narrated in #A47’s review. Moreover, the alarm sound was also noticed at the entrance on occasion. As Interviewee #07 stated, “One time, when I was about to open the door, the alarm suddenly went off. It indeed caught me off guard.” Similarly, some guests conjured up smart hotel rooms as “ghost houses” to reflect the horror they experienced. For example, #D210 exclaimed, “The air conditioning is quiet, but the temperature will be automatically adjusted in the middle of the night. Also, lights near the restroom are sound controlled, causing constant switching on and off, making the room seem like a ghost house.” Overall, emotional interference is mainly caused by unexpected operations and, sometimes, the dysfunctioning of smart intelligence.

**S-isolation**

*Isolation* reflects the flip side of the protection experience mentioned above. Contrary to the security and comfort that smart devices bring about, isolation induces a sense of insecurity and helplessness. Findings unveil two major properties: physical isolation and psychological isolation. Physical isolation is manifested as the lack of personnel available to deliver services when needed. As a result, customer needs are not fulfilled. For example, #C37 recounted that no staff answered the call when they hoped to change the mosquito coil liquid, making them feel physically isolated. Moreover, Interviewee #06 expressed her negative situation: “The gym equipment is quite innovative, but there was no customer service nearby. I was unsure how to operate it. I was helpless.”

Psychological isolation reflects feelings of loneliness and helplessness when interacting with smart gadgets. This is especially the case when customers seek to obtain a responsive intervention from frontline personnel. Indeed, during specific encounters, particularly when intelligent services fail to meet the expected standards, customers instantly crave face-to-face communication with human staff. This is because interacting with humans signifies warmth, while interacting with machines projects coldness; the latter situation exacerbates guests’ feelings of anger, helplessness and dismay. For example, customers complained that every encounter is tech-driven, lacking warmth in service quality (#F208). In a similar vein, #C154 complained, “No personnel available for check-in. It is a rather cold experience.” Review comments above echo the fact that technology often falls short in replacing human emotions such as empathy and warmth. Such failure provokes feelings of isolation, indicating an urgent need for operators to dispatch frontline professionals to complement smart services.

**S-regretfulness**

Exploiting technological services can also lead to experiences of regretfulness (Shih and Schau, 2011). As demonstrated in the findings, guests expressed regret for experiencing insubstantial experiential and functional qualities. Regret for experiential quality pivots on unsatisfactory experiences resulting from smart service failure or customer inability to adapt to smart services in their dwelling. Either guests encountered smart service failure or
they were unable to operate smart apparatuses, prohibiting the realization of full technological effectiveness in satisfying customers’ experiential needs. Indeed, customers expressed disappointment with their smart hotel stays, as they remarked that the promised smart services fell short of their expectations (D27; F156). For instance, A42 complained: “The hotel is equipped with advanced technological applications with remote control systems to control furniture by voice. However, many games and movies are unable to be played and watched. Without a clue, we are left with frustration and devastation.”

On the other hand, given the expectation of smart service quality, overly optimistic views about smart services can somehow lead to disappointment (Wirtz et al., 2018). Findings offer evidence of such hyped expectations of smart hotel stays, as some customers declared that they regretted their decision to book at a smart hotel (F57; F113). Others further reiterated that they were disappointed with particular functions of smart attributes, including robotic room services (F117), smart lighting designs and bathroom functioning (C08). In general, despite the technological development that has advanced many hotel services to improvise memorable experiences, the technology also has failed to address customer needs, especially in unexpected situations. At worst, the hyped smart appeals in hotel services might leave guests to regret their choice to stay in such accommodations.

**Discussion**

Figure 1 presents a summary of the research framework. By connecting categories through selecting coding, we are able to articulate the core category: the smartness paradox. On the upside, smart technologies offer patrons escapism, entertainment, education, esthetic, protection that collectively project a lifestyle of the future. More importantly, these very experiences cast favorable emotional valence and hence, amplify the desire to repeat indulgence of the services in a smart setting. Accordingly, patrons demonstrate a strong sense of satisfaction and intention to restay in the property and similar establishments.

**Figure 1.**
Smartness paradox of smart hotel experience

*Source: Created by authors*
On the flip side, smart technologies confront customers with interference and isolation experiences that render as annoyance and exasperation. These unsatisfying encounters lead to a sense of regret, as patrons face anxiety and dismay due to unexpected instances and out-of-control circumstances. Service failures coupled with feelings of seclusion and helplessness cast customers away from genuine hospitality services. As a consequence, guests seek to avoid smart settings in their future stays, and this situation aligns perfectly with evidence presented from prior literature on regret (Shih and Schau, 2011). Taken together, the positive and negative experiential encounters are coined as the smartness paradox to acknowledge the paradoxical view of smart services customers experience in smart hotels.

Theoretical implications
In general, technology can bring a wide array of benefits to firms and consumers. As a result, the literature by and large puts much emphasis on its upside by accentuating its invaluable role in assisting customers and bringing stakeholders solutions with efficiency and convenience (Kim and Han, 2020), quality (Wong et al., 2022a, 2022b), sensory arousal (Pelet et al., 2021) and empathy (Wong et al., 2022a, 2022b). Yet, its downside has received much less attention. Accordingly, the label “smart” often conjures an image of hassle-free services (Wirtz et al., 2018). However, smart services could backfire to create unintended consequences, with unpleasant and undesirable experiences that could undermine all the intelligent offerings that were designed to entice customers. To this end, this research serves as an early attempt to reckon with the dark side of smart services in the hospitality setting. It hence extends the work from Fu et al. (2022) on two grounds. First, this study puts emphasis on customers’ experiences with the hotel technology. It focuses on the end-users, who actually pay for the experiences and decide whether or not to continue using such services. Second, this study continues Fu et al.’s quest to acknowledge the peril of hotel technology by going beyond robotic services. By focusing on customers rather than employees, our work extends Fu et al.’s notion of technology’s drawbacks in the context of customer touchpoints.

Because smart devices include a constellation of advanced technologies, the present inquiry showcases how different smart appeals fail in various service encounters. The collated evidence, therefore, contributes to the broader domain of service failure to acknowledge how smartness could still render as a hindrance to business success (Arikan et al., 2023; Choi et al., 2021). Accordingly, this investigation brings smart service failure to the fore to notion several key failure themes that could jeopardize the entire operation with debased customers’ satisfaction and loyalty inclination. To this end, the findings go beyond the double-edged sword effect of technology (Zhani et al., 2021) by identifying new paradoxical challenges pertinent to smart services that have not been documented in the literature. They add new insights to regret theory (Shih and Schau, 2011) by underscoring how technology could cast a sense of regretfulness in smart services as well as reasons why patrons switch to less technologically advanced accommodation alternatives.

Additionally, this study redefines the experience economy paradigm set forth by Pine and Gilmore (1998). Drawing on Pine and Gilmore’s four realms of experience, we identified six themes (S-escapism, S-entertainment, S-education, S-esthetic, S-protection and S-futuristic lifestyle) that combine to explain how smart experiences can be enjoyed in the smart hotel setting. Importantly, our new findings go beyond Pine and Gilmore’s original thesis to acknowledge how these very smart experiences are mediated by technology. Such a techno-centric new paradigm helps to advance the experience literature by understanding the role of ICTs in creating and shaping experiences in the high-tech mediated service encounter. It also brings a leap forward to the Web 3.0 era and forward to illuminate how advanced technologies can be infused in every moment of the contemporary hospitality
setting. This new knowledge sets the study apart from other extensions of Pine and Gilmore’s work (e.g. Oh et al., 2007) as well as other experience-driven investigations, to put smartness in center stage of the experience delivery process. In particular, findings point to how various smart experiences could contribute to a smart lifestyle that patrons crave.

This research also differentiates from other technology-related experience studies (e.g. Wong et al., 2022a, 2022b; Yang et al., 2021; Kabadayi et al., 2019) to pivot on how smart experiences could invoke the futuristic lifestyle that patrons desire. In fact, the present inquiry demonstrates how hotels could be cast as a showroom for a future style of living that patrons could follow. Such evidence hints at the transformative power of smart hotel experiences that could shape customers beyond the specific well-being outcomes that the literature centers on (Galeone and Sebastiani, 2021). Rather, the transformative potentials illuminated in the current investigation cast new possibilities that afford the hospitality industry a role to transform people’s way of living. In other words, rather than focusing on the transforming of people’s soul or inner journey, as Sheldon (2020) frames it, this research takes a step forward to accentuate people’s future journey. We believe that this departure marks a rather unique contribution to the literature.

Perhaps a more important merit to the literature rests on the nascent idea of the smartness paradox. It underscores a paradoxical view of smart services to portray both pleasant and extenuating circumstances. This view challenges the taken-for-granted understanding about smart services that by and large entail positive connotations (Gonçalves et al., 2020; Kabadayi et al., 2019; Yang et al., 2021; Law et al., 2022), while advising caution that businesses should not merely follow the smartness bandwagon. The aforementioned paradoxes set forth in this inquiry lay the necessary foundation for the smart literature by highlighting dilemmas customers face during the smart service encounters. In particular, three experiential paradoxes stood out from the findings. The S-esthetic versus S-interference paradox underlies how smart designs and facilities could on one hand invite novel and memorable experiences; but on the other hand, they can create potential failure points that bring guests annoyance and irritation. The S-protection versus S-isolation paradox notions that there is no one-size-fit-all solution. While customers may want privacy and a sense of security on some occasions without the presence of employees, they prefer to receive interventions from staff in case of technology glitches, service failures and other instances that require immediate attention. Accordingly, it follows that patrons face the S-futuristic lifestyle versus S-regretfulness paradox, in which they seek enjoyment from the futuristic living standard on one hand, but they may also be disappointed by tenuous problems brought about by such a smart lifestyle. In summary, this inquiry creates a forum of discussion on the aforementioned paradoxes customers face in the smart setting.

Managerial implications
Being smart is not only costly in economic terms, it can be even more costly when such an offering irritates guests, thus creating unintended consequences that lead to regretfulness and avoidance behaviors, such as complaints and negative word-of-mouth, switching to other accommodations and rejecting future consideration of smart hotels. The peril of using smart devices thus presents tremendous challenges to the hospitality industry. In other words, smartness is not an antidote for addressing all customer needs. Rather, it is more reasonable to believe that customers still desire employee interventions when technologies fail to keep their promise. We are still not fully ready to offer completely humanless services to patrons. Rather, it is perhaps safe to say that we are at the incubation of the development of humanless smart settings. There are many design flaws and challenges that need to be addressed before we can confidently offer such completely autonomous services to patrons.
seamlessly. This improvement would require technology firms and service providers to work together to address functionality and usability issues as well as means to educate customers. Yet, smart services offer attractive solutions to customers and operators despite the aforementioned potential loopholes and failure points.

An alternative solution is to provide customers more interactive instructions on using the technology. For example, using AR/VR videos could allow guests to have an immersive experience during training of technology usage sessions. Gamification is another option that could be highly engaging, and it could allow guests’ acquaintance with new technology in a fun and pleasant environment. Additionally, operators could integrate their technology with mobile phone applications, leveraging customers’ familiarity of using their apps as an interface to gain better control of smart devices. For instance, Caesar’s Entertainment used the WeChat social media platform to allow guests to assess in-room amenities in an online environment that guests are familiar with. These plausible options and integrated systems could clearly make a difference to address issues presented from our findings.

Limitations and future research directions
This study contains several limitations that are worth mentioning. First, the selected smart hotels were located in China, with data collected from reviews among Chinese patrons. Although China is barreling ahead in smart services, results pose potential limitations with cross-cultural discrepancies that could exist in other regions and cultures. Second, our data are originally in Chinese. Although this process was undertaken by multiple translators with the assistance of online translation platforms, we acknowledge that the translation bias can pose a threat to the validity of the findings. Future research is suggested to use English reviews to cross-validate the findings of this study. We believe that future research could also extend the present inquiry to undertake experimental research to examine how customer perceptions and behaviors may change when they encounter favorable experiences followed by negative ones, and vice versa.

Note
1. We used A, B, C, D, E and F to represent the six studied hotels. For example, #C211 denotes the 211th comment about hotel C.

References


Appendix 1

1. What is the reason you would like to stay at this hotel?
2. How would you describe your experience in the smart hotel? Please explain in detail.
3. What are some positive outcomes associated with intelligent technology services?
4. How do you find the facilities and decorations of this hotel compared to others?
5. How do you feel about the self-check-in and contactless delivery services?
6. Have you interacted with the robot? What are your thoughts about it?
7. Have you used this hotel’s smart devices like curtains, lights, toilets, and gadgets? How do you feel about them?
8. What are the differences between this smart hotel and other traditional hotels? How has it made you feel?
9. How do you envision the future development of the hospitality industry?
10. How do you think the hotel’s smart technology can protect guests’ identity and information?
11. How do you think smart hotels bring new experiences and lifestyles that seemingly bring people to the future?
12. What are some negative outcomes associated with intelligent technology services?
13. Did any of the devices cause you any inconvenience or interference?
14. Were there any needs that could not be fulfilled due to the smart features of this hotel?
15. Without employees, would you feel you may be isolated or living in an environment without warmth and assistance?
16. Did this stay experience meet your expectations?
17. Were there any regrets in this stay experience? Is there any aspect where you would like to provide suggestions?
18. Would you consider staying at this hotel again in the future? Would you be open to staying at similar smart hotels again?

Source: Created by authors
Figure A2.
Flow of Methods

Source: Created by authors
### Appendix 3

#### Table A1. Demographic profile of interviewees

<table>
<thead>
<tr>
<th>Hotel</th>
<th>Respondent</th>
<th>Gender</th>
<th>Age range</th>
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</tr>
<tr>
<td>Hotel Kapok Shenzhen</td>
<td>#03</td>
<td>Male</td>
<td>41–50</td>
</tr>
<tr>
<td>Hotel Kapok Shenzhen</td>
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<td>31–40</td>
</tr>
<tr>
<td>Hotel Kapok Shenzhen</td>
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<td>Hotel Kapok Shenzhen</td>
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<td>Female</td>
<td>41–50</td>
</tr>
<tr>
<td>Hotel Kapok Shenzhen</td>
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<td>Hotel Kapok Shenzhen</td>
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</tr>
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<td>Hotel Kapok Shenzhen</td>
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<td>Hotel Kapok Shenzhen</td>
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<tr>
<td>Hotel Kapok Shenzhen</td>
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<td>31–40</td>
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<td>Hotel Kapok Shenzhen</td>
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<td>FlyZoo Hotel</td>
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<tr>
<td>FlyZoo Hotel</td>
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<td>21–30</td>
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<tr>
<td>FlyZoo Hotel</td>
<td>#22</td>
<td>Female</td>
<td>21–30</td>
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**Source:** Created by authors
### Appendix 4

<table>
<thead>
<tr>
<th>Themes</th>
<th>Categories</th>
<th>Example quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Esthetic</td>
<td>Hotel facility</td>
<td>All the facilities in the rooms are looking advanced. They go beyond the level of a four-star hotel in terms of appearance and practicality, even better than many five-star hotels. (#A36) The hotel has advanced facilities, including self-service check-in machines at the front desk, robots, and guest room intelligent control systems, all using the latest technology. (Interviewee 19) The decoration style of the hotel is superb. The use of simple lines and colors exudes a modern and stylish feel. (Interviewee 03)</td>
</tr>
<tr>
<td></td>
<td>Hotel design</td>
<td>The experience differs from traditional hotels; the overall feeling is more modern and minimalist. (#F13)</td>
</tr>
<tr>
<td>S-Escapism</td>
<td>Mental escape</td>
<td>The design is full of technological sense. I also have game consoles, yoga balls, books, and tea cups in the room. This trip is fun! (#A05)</td>
</tr>
<tr>
<td></td>
<td>Temporal–spatial escape</td>
<td>When my children moved into the room, they screamed for the “Tmall Genie.” They commanded the “Tmall Genie” to tell them a joke. They played like this for a long time. This is an excellent place for kids to have fun, allowing parents to relax and take a break. (Interviewee 14)</td>
</tr>
<tr>
<td>S-Entertainment</td>
<td>Operational entertaining experience</td>
<td>Full of self-check-in and check-out, with the fun experience of operation. It does not require customers to wait in line and only takes a few minutes. (#C134) Robotic food delivery services are fun. It delivered what I wanted to my room quickly and was lovely. Not only the sound but also the electronic screen with the super cute baby face pattern. (Interviewee 12)</td>
</tr>
<tr>
<td></td>
<td>Functional entertaining experience</td>
<td>The toy gun in the hotel is quite fun, and children like it so much that they still miss it two days after leaving the hotel. (#A46) I usually enjoy playing video games, so seeing a game controller in the room made me happy and excited. I tried a few games, and they seemed pretty good. (Interviewee 09)</td>
</tr>
<tr>
<td>S-Education</td>
<td>Product-related education</td>
<td>All the design is automated, such as sensor lights and air conditioning. The concept of intelligence is quite apparent. Patiently reading through the guidelines facilitates an easy check-in. (#C97) Some of the labels are clear to me, such as the large shower, hand shower and the picture next to the temperature control knob in the shower - they are simple to understand and easy to operate. (Interviewee 07)</td>
</tr>
<tr>
<td></td>
<td>Business environment-related education</td>
<td>The hotel is safe and quiet, intelligent and environmentally friendly. It is the new direction toward 'smart,' representing the future development of the hotel industry. (#F163) This hotel opens the door by swiping your face or scanning a QR (continued)</td>
</tr>
<tr>
<td>Themes</td>
<td>Categories</td>
<td>Example quotes</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>S-Protection</td>
<td>Psychological protection</td>
<td>Very good, quiet and comfortable; there are no additional attendants, so customers will not feel they are being watched or monitored. (<a href="#">#E35</a>) I completed the check-in process myself so others did not see my personal information. I think it is relatively private. (<a href="#">Interviewee 16</a>)</td>
</tr>
<tr>
<td></td>
<td>Physical protection</td>
<td>Nice and clean, the password is needed to enter the front door, which makes me feel very safe. (<a href="#">#B14</a>) When I got on the elevator, I needed to swipe my face to press the floor number. This means that if someone’s face is not in this system, he/she cannot get into the elevator, which is also relatively safe. (<a href="#">Interviewee 14</a>)</td>
</tr>
<tr>
<td></td>
<td>S-Futuristic lifestyle</td>
<td>The room is comfortable, especially the bathroom is full of a sense of high quality (<a href="#">#A27</a>) Children can play Tmall Genie, so we have more time to do our own things. From a technical point of view, we only need to close the curtains on our mobile phones, saving effort, and focus on doing the things we like more. (<a href="#">Interviewee 14</a>)</td>
</tr>
<tr>
<td></td>
<td>High-quality experience</td>
<td>There is no manual operation from check-in to entering the room. It takes just a few minutes to complete, a perfect experience! (<a href="#">#E123</a>) The biggest thing I have noticed living here is how much more convenient technology has made life. For example, curtains and toilets in the room do not require manual operation; these automated functions make life easier. (<a href="#">Interviewee 09</a>)</td>
</tr>
<tr>
<td></td>
<td>High-efficiency experience</td>
<td>The sensor light design in the room is very impractical. The light goes on when I do not need it and automatically goes off when I need it. (<a href="#">#C08</a>) The toilet's sensor functionality is weird at times. I was about to look in the mirror when the toilet opened itself. However, once, I needed it to open automatically, and it did not respond. (<a href="#">Interviewee 09</a>)</td>
</tr>
<tr>
<td></td>
<td>Sensory interference</td>
<td>When I go to the bathroom at midnight, all the lights automatically turn on to cause me a sudden shock. (<a href="#">#D164</a>) When I opened the door, maybe because I opened the door too quickly or with too much force, the alarm clock in the room suddenly rang, which shocked me. (<a href="#">Interviewee 06</a>)</td>
</tr>
<tr>
<td>S-Interference</td>
<td>Emotional interference</td>
<td>Getting the authority to open the door is very troublesome, and there is no customer service at the door. (<a href="#">#B45</a>) I ordered takeout to be delivered to my hotel room, and when the robot brought it up, there was supposed to be a door open where I could get my stuff. However, I noticed that the robot did not have any visible openings. No staff was around to tell me what to do, so I wondered if I should go downstairs to the front desk and ask. It was a moment that felt a little isolating. (<a href="#">Interviewee 08</a>)</td>
</tr>
<tr>
<td></td>
<td>Psychological isolation</td>
<td>For hotels, the staff still needs to be deployed to communicate with people to provide the necessary interventions. (<a href="#">#F81</a>) Delivery robots are convenient, but it would feel more personal and welcoming if a human provided the service. (<a href="#">Interviewee 04</a>)</td>
</tr>
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</table>

Table A2. (continued)
### Themes

<table>
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<tr>
<th>Themes</th>
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<tbody>
<tr>
<td>S-Regretfulness</td>
<td>Insubstantial experiential quality</td>
<td>It does not feel as intelligent as I expected. I wanted to try the robot food delivery service, but it was said that there was only one artificial waiter, and the children were disappointed. (#F156) I regret not talking to this robot sooner. Every time I see this robot, there are many children around. The robot is so cute. I heard it can dance and sing. I want to experience it. (Interviewee 15)</td>
</tr>
<tr>
<td></td>
<td>Insubstantial functional quality</td>
<td>I feel disappointed after checking in as the sound-controlled lights are very problematic. There is no way for me to express grievances directly to the robots. The rest of the hotel experience is similar to ordinary business hotels. (#E140) The bathroom mirror is supposed to let you choose which news to watch, but I have a problem with it. There is no back button, so the page is stuck. Additionally, news, music, and videos are stale and boring. It seems that this device is not working very well and needs improvement. (Interviewee 11)</td>
</tr>
<tr>
<td>Behavioral intention</td>
<td>Loyalty</td>
<td>I like the new technology, so I will still be interested in staying in a smart hotel like this in the future. (Interviewee 07)</td>
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<tr>
<td></td>
<td>Avoidance</td>
<td>If the prices are similar, I might choose a traditional hotel instead of these smart hotels next time. The experience was not what I expected, and I feel like I did not get my money’s worth. (Interviewee 10)</td>
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**Table A2.**  
*Source: Created by authors*
### Table A3.
Frequency of online reviews

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<th>Themes</th>
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<th>Hotel B</th>
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**Source:** Created by authors

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