



Hospitality service aesthetic of luxury hotel front desk and its effect on consumers' willingness-to-pay price premium

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Abstract

Draws on the integration of aesthetic theory and transaction-specific satisfaction theory, this study concentrated on the concept of hospitality service aesthetics of the front desk of luxury hotel about consumers' perception among the visual servicescape and humanistic appearance and potential effect on their willingness-to-pay price premium. A mixed method approach of both lab experiment and field investigation was applied to test three hypotheses. The results showed that consumers' visual aesthetics of front desk with non-thematic style have a more significant impact on their willingness-to-pay price premium compared to the thematic style. This study also indicated that the physical attractiveness of employees is a moderator only when consumers' willingness-to-pay price premium during service interactions in the context of thematic front desk with low hospitableness.

Keywords Hospitality servicescape, aesthetics · Transaction-specific satisfaction · Willingness-to-pay price premium · Luxury hotel

Introduction

Prior literature on consumption and marketing portrays aesthetics as the particular quality of being beautiful, sublime, or moving or interesting as a foundation for many current market activities (Holt, 2004; Dion & Arnould, 2011; Fillis, 2014; Pomiès et al., 2021) and is a central element in the reinvention, revalorization, and appropriation of symbolic resources (Reckwitz, 2018; Andersen, 2019) for customers' information processing and attitude formation (Horng

& Hsu, 2021; Lin & Lai, 2010). In the context of hospitality industry, not only the aesthetics in the physical environment (Kirillova & Lehto, 2015) but also the aesthetic working as consumption of superior visual quality design can often evoke pleasant emotion (Norman, 2004), customer engagement (Genc & Kozak, 2020; Tsaur et al., 2015) and better communicating with the quality, character, and identity of the corporation (Genc & Kozak, 2020).

Despite existing studies of such effect of aesthetics on consumers' experience and service evaluation in hospitality relevant settings, such as hotel's website (Kirillova & Chan, 2018), plantations (Apaolaza et al., 2020), aesthetic labor (Genc & Kozak, 2020), and visual servicescape attributes, for example the color of interior decoration (Kim et al., 2020). At present, studies about service aesthetics that take specific hospitality settings into consideration are sparse, as scholars commonly focus on the whole context, such as restaurants, hotels, or attractions (Bogicevic et al., 2018; Chan et al., 2021; Horng & Hsu, 2020, 2021; Kumar et al., 2017; Lockwood & Pyun, 2020; Nair et al., 2022), except limited attention on hotel lobby and guestroom (Lin, 2016; Kim et al., 2020). This problem has restricted a fuller understanding about how aesthetic service appeals could be applied in certain hospitality context.

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Luxury hotels as the high ranking hospitality institutions which face with intense competition and constantly search for ways to distinguish their products and services (McNeill, 2008), creating a delightful distinctive servicescape undoubtedly is important for them as an advantageous opportunity to differentiate themselves from competitors and attract consumers (Wang et al., 2013). With respect to the front desk as one of the hospitality service elements which usually located in the central of hotel lobby and the most important service setting for almost all of the guests, is paid much efforts for aesthetic design by practitioners, however, has not been attracted sufficient attention. On the other side, the evaluation of customers' experience and reactions to a particular service encounter as the transaction-specific satisfaction (Jones & Suh, 2000) has been widely identified its contribution on consumers' positive feedback, such as loyalty (Ji & Prentice, 2021; Truong et al., 2020). Therefore, this study chosen front desk of luxury hotel as the research target to evaluate what and how the consumers assess its transaction-specific aesthetics and furthermore its effect on their behaviors.

Also, these prior studies often lack guidance from the broader theoretical strands and hence are limited in scope. In other words, prior literature is short of an overarching theoretical foundation and so may neglect a deeper narrative of the aesthetics inquiry (Chan et al., 2021; Kirillova & Lehto, 2015; Vlahos et al., 2022), which induced limited discussion of the aesthetic and its role. Based on the above argument, this study adopted the aesthetic theory by Adorno (1997) that aesthetic is autonomously perceived, social determined, criticality, and the mimetic character of art and beauty. In the context of luxury hotel, this theory has been interpreted that the service aesthetics is mediated by ocular-servicescape, facility spectacle, thematic embellishment, architectonic magnificence, and humanistic appearance (Wong et al., 2023). Considering the reality of front desk of luxury hotel, therefore, ocular-servicescape, thematic embellishment and the humanistic appearance are employed to assess those consumers' service aesthetic perception.

Therefore, this study aims to explore what and how consumers' perceived service aesthetics of the front desk of luxury hotel is constructed and moreover effect their' willingness to pay premium price (WTP-PP) since luxury hotel's economic profit-orientation. Specifically, this study first of all will evaluate consumers' perception among ocular-servicescape of front desk which designed in different style and its potential different effect on their willingness to pay premium price. Secondly, the humanistic appearance which is represented by employees' personal grooming and bodily appeal, is measured by consumers' perceived physical attractiveness and hospitableness to evaluate whether and how it has indirect effect between consumers' perception

of ocular-servicescape of front desk and their willingness to pay premium price among luxury hotel. Methodologically, this quantitative research includes not only laboratory experiment but also field investigation in Macau which is one of the most popular tourist destinations of the world and has 36 five-star or even higher ranking hotels (Macau Government Tourist Office, 2021). This study therefore also contributes to the literature on the consumer servicescape of luxury hotels in Macao and will provides managerial suggestions for industrial practitioners as well.

Literature review

An overview of the concept of aesthetics

Aesthetics is a central concept in consumption and market studies as the notion which include a variety meanings of sensory experiences relating to art or concerning everyday objects. Meanwhile, there also exists a wide range of conceptual categories that define aesthetics, such as form and expression, harmony and order, symbolism and imagery, beauty, taste, and feelings (Venkatesh & Meamber, 2008). As the word which was originally derived from the Greek "aisthanesthai" (to perceive), and "aistheta" (things perceptible) (Porteous, 2013), aesthetics has a deep root from the word "beauty" and is often associated with art, such as sculptures and paintings (Vlahos et al., 2022; Wolff, 2021). Beauty as commonly understood refers to things "that are pleasing, either to the senses, to the imagination, or to our understanding" (Lavie & Tractinsky, 2004, p. 271). It has been a prominent concept since classical Greek literature, gaining wider acceptance with the term *aesthetic* based on Adorno's aesthetic theory (Adorno, 1997).

Adorno's (1997) aesthetic theory stands apart from other aesthetic discourses in philosophy by underscoring the double character of art: autonomous vs. socially determined, and critical vs. mimetic. Adorno considers that beauty is an autonomous reflection upon one's subjective judgment and hence, the beauty of art is a manifestation of an autonomous monad, for example, the self-reflection or evaluation of the artistry (Shelley, 2022). In other words, art is an aesthetic experience that one should interpret for meaning that lies beneath (Paddison & Adorno, 1987). However, Adorno also asserts that artistic appreciation is situated within the social domain where meanings and hence, beauty is socially determined (Paddison & Adorno, 1987) which is from the commonly agreed standard of a given community or culture (Heynen & Adorno, 1992). Furthermore, the criticality should be acknowledged that "modernity evokes a crisis of experience because it increasingly destroys living conditions that are favorable to real, intense experiences and profound

interpersonal contacts” (Heynen & Adorno, 1992, p. 82). In other words, contemporary art often embraces advanced techniques and production approaches to deliver desirable experiences to customers. But such a process could face numerous challenges from the taken-for-granted methods. Finally, mimesis refers to imitation or representation of an existing object in the real world through artistic expression (Adorno, 1997). Heynen and Adorno (1992, p. 83) further notion that the “mimetic moment of cognition.. has to do with the possibility of approaching the world in a different way than instrumental thinking and situating the affinity at a deeper level than surface similarity.” In this sense, beauty is a reflection of the world through the lens of artistic manifestation via mimetic improvisation from its creator.

In current society, aesthetic is depended on an objective judgment as it lies in a person’s situated cognition that confines his/her understanding of the world. There are certain features of an object that have the inherent quality that are agreed upon by people in a community (Wolff, 2021). In particular, Lin and Lai (2010) discovered Chinese consumers’ aesthetic attributes for one thing are derived from cultural values, collective interpersonal relationships, and social spirits and norms; for another, relies on consumers’ perceptions about the appearance of products, which are often determined by an individual’s taste, personality, and life experiences. Accordingly, an individual’s aesthetic evaluation is often produced when his or her emotions are projected on external objects. It also depends on the ability of the aesthetically designed object to evoke sensory arousal of the consumers (Alfakhri et al., 2018).

Aesthetic attributes and relevant studies in hospitality

Customer aesthetic evaluation is escalating research in the extant literature. In the hotel context, it has been revealed that consumer’s sense making can be supported by aesthetics related to the physical environment (Norman, 2004; Rafaeli & Vilnai-Yavetz, 2004). Meanwhile, in the hotel environment, products are often aesthetically oriented (Urry, 1995) and “hold for a particular consumer in his/her relationship with products [or services]” (Bloch et al., 2003, p. 552). Consumers with high visual aesthetics believe that beautiful objects can affect their quality of life, enabling them to achieve higher levels of needs together with an impact on their brand preferences (Alfakhri et al., 2018; Mumcu & Kimzan, 2015), thereby helping to shape their overall image perception of a hotel (Lin & Worthley, 2012).

For example, one of the selection attributes is their sensory perception which often link to perceived physical

quality and design elements such as room decoration and furnishings (Alfakhri et al., 2018). Meanwhile, fashionable design is particularly important to a growing breed of discerning, style-conscious travelers (Bovich, 2007; Lim & Endean, 2009). Project simplicity and elegance as well as a home feeling with comfort are also often able to entice customers (Chan et al., 2021). In addition, contemporary luxury design together with preservation of the property’s traditions and heritage are the two key aesthetic elements perceived by customers for boutique hotels (Lim & Endean, 2009).

Meanwhile, the concept of servicescape entails the essence of beauty in service environment design (Bitner, 1992). A superior servicescape should meet the three key elements of physical setting which are ambient conditions, space and function and signs/symbols/artifacts (Ye et al., 2021). This point has been identified in integrative resort that aesthetic aspects of the servicescape such as warm and pastel colors in the decoration, colorful exterior design, flashing lighting and so on play the most crucial role in creating the customers’ total experiences (Chan et al., 2021; Jablonska et al., 2018). Moreover, the term “theme” is also an important aesthetic indicator, especially in the context of themed hotels. Sun et al. (2021) show that cultural appeal such as European style and design cues like European architectural are key elements in inducing customers’ pleasant arousal. Finally, the appearance of employees also reflects an avenue of aesthetic presentation (Wang & Lang, 2019). Tsaur et al. (2015) identify the role of aesthetic labor in the hotel setting that front-line employees, who possess attractive physical traits along with a professional image, can evoke positive emotions of customers such as pleasure and excitement. Yang et al. (2022) further refer to a “beauty premium” to reflect preferences of customers regarding servers’ facial and body appearance.

Although the aforementioned literature lays the necessary foundation, it remains unclear how aesthetic service appeals could be demonstrated in a certain hospitality context, as these prior works commonly center on a whole hospitality setting. Meanwhile, despite the wide consensus of the effect of aesthetics in hospitality context on consumers’ perception and behavior. Previous researches are lack of comprehensive study regarding the difference of consumers’ perception and behavior among certain hospitality setting since their differentiate aesthetic perception. Also, these prior studies often treated the consumers’ perceive aesthetic and its effect on their behaviors as a simple stimuli- response setting and thus are lack guidance from the broader theoretical strands and hence are limited in scope.

Theoretical framework

Transaction-specific satisfaction theory

Transaction-specific satisfaction refers to consumer dissatisfaction with a discrete product/service encounters (Jones & Suh, 2000), which not only capable of seize the customers' intricate psychological responses to a certain situation (Oliver, 1997), but also possible to measure the latest experience of a particular service transaction and thus contributes to marketers to follow up the changes in service performance (Prentice & Kadan, 2019). As a notion related to the post-purchase/consumption evaluation of a particular service encounter (Jones & Suh, 2000), in certain industries such as hospitality, it can be considered a precondition for ISO 9001 certification since it can capture customer experience, resulting in a quality or service improvement plan (Radojevic et al., 2015; Keiningham et al., 2014). Furthermore, customer satisfaction with every service experience can lead to purchase and maintain their relationships with the business (Liu et al., 2008; Prentice, 2013, 2018; Keiningham et al., 2014). Therefore, to accomplish business-related outcomes, it is essential for service providers and marketers to guarantee customers' transaction-specific satisfaction during every service interaction.

Meanwhile, this transaction-specific satisfaction theory has been used in hospitality field to explain the attributes of consumer satisfaction among certain product or service such as the regional cuisine and fast food (Adongo et al., 2015), dining and accommodation in integrative resort (Gao & Lai, 2015), hotel lobby and guest room (Lin, 2016; Kim et al., 2020; Tarmudi & Jaharuddin, 2022) have been identified the effect on the overall satisfaction. Based on the above argument, this study choose the front desk section which is one of the important service settings in luxury hotel as the research site based on transaction-specific satisfaction theory to evaluate the consumers' hospitality service aesthetics perception regarding ocular-servicescape and humanistic appearance according to the aesthetic theory and its potential difference of the effect on their willingness to pay premium price in both direct and indirect aspects.

Transaction-specific satisfaction attributes

Ocular-servicescape The definition of servicescape refers to the physical surroundings of service organizations, consisting of ambient conditions, space/function, and signs, symbols & artifacts (Bitner, 1992). Despite this framework serves as a foundation for the physical environment, which is a significant prerequisite for consuming behaviors, it has also drawn criticism for ignoring the impact of social cues, a crucial component of the consumer environment (Line

et al., 2018). Therefore, later researchers taken the social aspect of servicescape into consideration when discuss its effect on the consumers behavior (Dedeoglu et al., 2018; Hanks et al., 2017; Hanks & Line, 2018; Line & Hanks, 2019; Meng & Choi, 2017; Liu et al., 2018). Moreover, Rosenbaum and Massiah (2011) proposed a servicescape framework as “[...] the physical, social, socially symbolic, and natural stimuli” which are subjective, immeasurable and uncontrollable but may enhance or constrain employee and customer approach/avoidance decisions and social interaction behaviors.

Luxury hotels are considered relatively expensive places, giving superior high-quality service and charging high prices for this (Huh et al., 2019). In this context, the conceptualization of servicescape initially mainly follows up the Bitner's (1992) definition of the physical components in the servicescape and the consumers' aesthetic perception regarding these physical components which have been identified as a key role in the construction of consumers' attitude and behavior (e.g. Chan et al., 2021; Kim et al., 2020; Lin, 2016; Lockwood & Pyun, 2020; Peng et al., 2022; Tarmudi & Jaharuddin, 2022). From the aesthetic theory, the ocular-servicescape should focused on the visual aesthetic illustration in this study. According to the analysis of the construction of the hospitality service aesthetic by Wong et al. (2023), one of the key mediators of consumers' aesthetic perception in visual aspect is the artistic perception of the decoration. Meanwhile, the thematic embellishment which is about aesthetic appeals of a property's overall look and feel is also identified as the key mediator as well (ibds.). In particular, some front desks of luxury hotels in Macao demonstrated special cultural thematic appeal which are about the cultural meaning and significance embedded within a specific themed property and are generally believed to be more visually attractive (Chan et al., 2021), for example, the Parisian projects a European flavor, while the Venetian conjures an image of the Venice.

Humanistic appearance components: employee physical attractiveness Physical attractiveness refers to the positive responses people make to an objective measure of a person's appearance through physical characteristics such as facial symmetry, height, skin tone and eye color (Hill, 2002; Weeden & Sabini, 2005). Physical attractiveness of an employee is described as the degree to which a consumer perceives service staff as having an appealing and pleasing physical appearance (Čivre et al., 2013; Guo et al., 2017). Meanwhile, in contrast to unattractive salespeople, attractive salespeople are more popular, more likely to respond to their pitches, and show higher purchase intentions (Frevort & Walker, 2014). This point also is identified in the service sector (Luoh & Tsaur, 2009; Soderlund & Julander, 2009).

While due to potential self-presentation issues, consumers are less willing to engage with highly attractive employees (Wan & Wyer, 2015). In hotel environment, scholars have identified that employees' physical attractiveness have an impact on consumers' response (Fang et al., 2020; Li et al., 2021; Hanks & Line, 2018; Wu et al., 2019). While consumers' positive behavioral intention could be influenced by the high attractive appearance employees but cannot eliminate the effect from other relevant factors such as the conspicuous consumption cue and service expertise (Petty et al., 2009).

Humanistic appearance components: perceived hospitableness Perceived hospitableness refers to the quality or character of receiving and treating guests and strangers in a warm, friendly and generous manner (Brotherton & Wood, 2008; Pizam & Shani, 2009). The core of hospitableness is motivated by a genuine desire to entertain and take care of the guest (Lugosi, 2008). It is the interaction and interpersonal relationship that occurs between the host and the guest during the service delivery process, which is described as a psycho-social phenomenon and emotionally charged structure that indicates “positive attitudes, behaviors, and personality traits of the host, which leads to a positive emotional response from the guests” (Tasci & Semrad, 2016, p. 86) which has been referred by many scholars in discussion of consumers' feedback of employee's performance (e.g. Ariffin & Maghzi, 2012; Ariffin et al., 2013; Lynch et al., 2011). Meanwhile, hospitableness can differentiate a brand from its competitors by delivering unrivalled superior value and having a favourable effect on long-term competitive performance (Hemmington, 2007; Lashley, 2008; Tasci & Semrad, 2016).

From a consumer psychology perspective, reality is determined by consumer perceptions (Chase & Dasu, 2001). The term perceived hospitableness in this study relates to the degree to which consumers prior to visitation evaluate the front desk of luxury hotel as being hospitable. Transferring Tasci and Semrad's (2016) conceptualization to the context of hotels, this research thus focuses on consumers' assumptions of whether a front desk of luxury hotel might make them feel welcome, cares about them, and treats them friendly and respectfully. Tasci and Semrad (2016) note that the heart-warming dimension of hospitableness is especially relevant in close guest-host interaction settings typically experienced at hotels. Meanwhile, since customers face endless choices and streams of information in today's competitive environment, the guest-host interaction begins with the first impression (Mody et al., 2019). This makes it fundamentally important to transfer perceived hospitableness to the certain service setting, allowing this essential aspect

of the interactive service environment to be received as part of the first impression (Kandampully et al., 2022; Zhu et al., 2019).

Willingness-to-pay price premium

Willingness-to-pay price premium refers to the portion of the price that consumers are willing to pay for the high-quality or unusual or hard-to-obtain features of a product (Rao & Bergen, 1992). In terms of managing organizational revenue effectively, emphasizing a premium pricing strategy for luxury products is crucial, as “Luxury has a psychological association with premium pricing” (Yeoman & McMahon-Beattie, 2006, p. 326). The concept of willingness-to-pay price premium has been evaluated in studies as an indicator to measure consumer preferences for luxury goods (Chua et al., 2015; Hyun & Han, 2015). Therefore, consumers' willingness-to-pay price premium is vital to the research of the outcome of luxury hotel consumers' experience (Ahn et al., 2022).

As the aesthetic economy period that visual aesthetics affects consumer perceptions (Bloch, 1995; Dumaine, 1991; Schmitt & Simonson, 1997), product's high aesthetic appearance has been revealed its high influence on consumers' attachment (Hollins & Pugh, 1990) and moreover, on their desire to pay more (Townsend & Sood, 2012). In the context of hotel, Lin's (2016) study about the consumers' aesthetic perception of hotel lobby has been identified its significant direct effect on their willingness to pay more. Meanwhile, inspired by artifact characteristics such as color and size; different individuals has a different interpretation of aesthetics (Rafaeli & Vilnai-Yavetz, 2004).

With respect to the front desk of luxury hotel, it is the visual central point of the lobby and the place that almost all of the consumers could have service interaction with front-line employees. However, whether and how the different style of ocular-servicescape of the front desk could induce consumers' differentiate reaction on their willingness to pay more however has not been identified. According to the previous study of the hospitality service aesthetics of the thematic embellishment of the luxury hotels in Macao (Wong et al., 2023), this study proposes the following hypothesis:

H1: Luxury hotel consumers' perceived ocular-servicescape of front desk has a positive effect on their willingness-to-pay price premium. In particular, consumers' perceived thematic ocular-servicescape in relative to the non thematic front desk has more significant effect on their willingness- to- pay price premium.

In the hospitality setting, scholars have noted that employees' physical attractiveness can increase customer satisfaction

and other positive feedback (Čivrić et al., 2013; Fang et al., 2020; Knežević et al., 2015; Li et al., 2019b). Meanwhile, employee beauty has been identified its moderator role in the servicescape discussion regarding consumers' perception and behaviors (e.g. Tsai et al., 2016; Wu et al., 2019). In the context of front desk of luxury hotel, those front-line employees who are working in this place indeed is part of the servicescape which could influence consumers' reaction as the previous literature indicated that employee's beauty is premium for consumers that they are more likely to interact with and purchase products from attractive service providers (Ahearne et al., 1999; Wan & Wyer, 2015) and to tip generously (Li et al., 2019a, b). Based on the above argument, this study proposes hypothesis:

H2: Luxury hotel consumers' perceived ocular-servicescape of the front desk and its effect to their willingness-to-pay price premium moderates by the employees' physical attractiveness.

Previous researches has shown that hospitableness behaviors have a direct positive impact on guest behaviors such as satisfaction in the hospitality industry (Ariffin & Maghzi, 2012; Ariffin et al., 2011; Lashley, 2015; Tasci & Semrad, 2016). Meanwhile, current research of the consumers' perceived hospitableness shown mediate effect when discussing the link between the quality of communication of consumers to hosts in family-run hotels and the consumers' positive responses (Scholl-Grissemann et al., 2021). Based on the

argument, this study puts forward the following hypothesis to evaluate the consumers' perceive hospitableness mediate role (Fig. 1):

H3: Luxury hotel consumers' perceived ocular-servicescape has a conditional indirect effect on their willingness-to-pay price premium through employees' physical attractiveness at different levels of perceived hospitableness of employees.

Methodology

Research setting

Macau is one of the most popular destinations in the world and the hotel industry in Macau is dominated by luxury hotels, with 11 five-star luxury hotels and 25 five-star hotels (Macao Government Tourism Office, 2021). Meanwhile, luxury hotels in Macau are usually large-scale, providing top-quality accommodation and catering facilities, deluxe and impressive décor, and a variety of facilities and gaming entertainment (Yang & Lau, 2015). Therefore, although the cost of hotels in Macau is higher than for similar hotels in other regions, they are the main choice for most tourists who visit Macau. Given that more than half of the luxury hotels in Macau are located in the Cotai area, this study choose the luxury hotels in this area as places for data collection.

Overarching Logic of the Framework

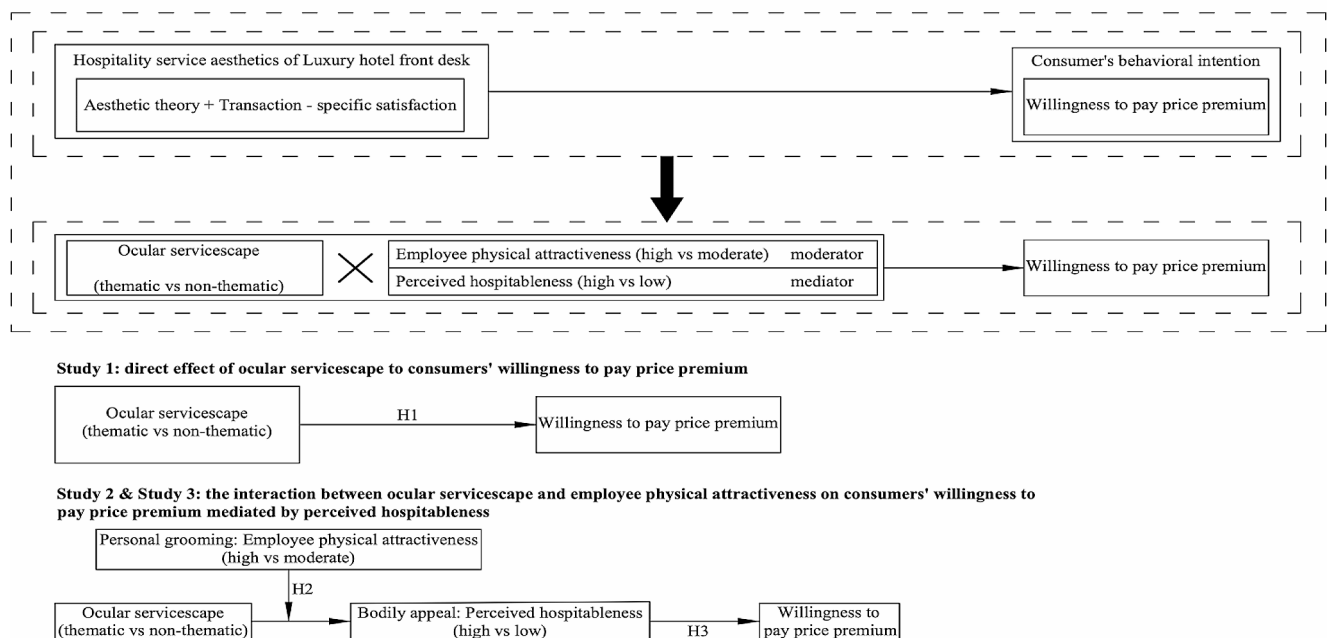


Fig. 1 The concept framework of this study

Measurement

The scales of this study originate from the relevant literature (Appendix 2 Table 11). Specially, the scales for ocular-servicescape including 7 items was adapted from Kumar et al. (2013) which has been employed in the studies of consumers' visual servicescape perception through experiment survey (e.g. Kumar et al., 2017; Shin et al., 2023). The employees' hospitableness scale of front desk was derived from 7 items created by Mody et al. (2019) which is originated from the analysis consumers' hotel experience and has been used in the discussion of consumers in various service settings such as airbnb (Kandampully et al., 2023; Zhu et al., 2019). The employees' physical attractiveness is evaluate by the single item proposed by Fisher and Ma (2014), which is about the assessment of the consumers' reaction regarding employee's face appearance and has been used in the discussion of employees' physical appearance in hotel context (Fang et al., 2020; Li et al., 2019a). Willingness-to-pay price premium scales with three items were adapted from Lin (2016) as a valuable variable regarding consumers' behavioral intention in luxury service settings (Shin et al., 2023; Wu & Gao, 2019) to evaluate consumers' intention to pay more regarding the service beauty of front desk they experienced.

All items (Table 1) were marked by a seven-point Likert scale (i.e. 1 = "Strongly Disagree"; 7 = "Strongly Agree"). The survey initially used English and language professionals translated the English into Chinese. Another two researchers translated the Chinese version back to English and double check the consistency of the original version and the Chinese translation in case of the potential misunderstanding (Nurjannah et al., 2014). Since all of the measurement used in this study have been validated in previous relevant researches, which indicated its good content validity. A pilot study used purpose sampling to distribute the questionnaire to consumers who had stayed at least one night of the luxury hotels in Cotai, Macao since November 2023. In total, 120 valid datasets were obtained, with 81% valid responses. All items were retained, as their CITC values were above 0.5 (Hair et al., 2006). The values for Cronbach's alpha, ranged from 0.81 to 0.96, thus confirming satisfactory reliability for all scales. The average variance extracted (AVE) and the composite reliability (CR) indicators are both higher than the thresholds cited in the relevant literature (AVE > 0.5 and CR > 0.7), supporting the convergent validity of the constructs.

Experiment design

Two experimental tests were presented in this study. While previous studies in tourism hospitality mainly used the

correlation analysis and can point to possible causal relationships. The disadvantage of such analysis is clearly that they cannot prove which construct drives the other construct(s) and cannot prove cause-and-effect relationships, either (Kallbekken & Sælen, 2013). As this study aims to assess consumers' perception of hospitality service aesthetics and its effect to willingness to pay premium in luxury hotel context, experiment which can allows conclusions about cause-and-effect relationships and statements of the following type: if we do X, the consequence will be Y (Dolnicar et al., 2015) therefore is adopted. A laboratory experimental research thus was used to investigate the psychological mechanism behind the relationship between consumers' perception of ocular servicescape of the front desk and their willingness-to-pay price premium in Study 1. Study 2 is a subsequent laboratory study that to measure the luxury hotel guests' actual willingness-to-pay price premium behavior and the internal interaction of the three transaction-specific satisfaction components of ocular servicescape, perceived physical attractiveness and hospitableness.

Considering the validity of the research result in both external and internal aspects (Gneezy, 2017; Lynch, 1999), this study based on the previous scholars' suggestion (Fong et al., 2015; Gneezy, 2017) that in order to comprehend the process underlying the effect, a field investigation (Study 3) was followed after the by laboratory studies. The lab study although can ensure that the researcher is in full control of the environment and provide internal validity by testing the mechanisms underlying the proposed relationship (Lynch, 1999). It is a lack of external validity and could cause high labor intensity, long time consumption, and susceptible to bias due to uncontrollable circumstances beyond the researchers' control, especially the concern about the tourism environment (Cvelbar et al., 2017; Dolnicar et al., 2017; Gneezy, 2017). Therefore, the field investigation which is advantageous in its high external validity since its measurements of the real human behaviors (Goldstein et al., 2008; Gneezy, 2017; Mair & Bergin-Seers, 2010) thus is conducted as the study 3 as the make-up for the shortcomings of the laboratory experiment.

Research results

Study 1

Experiment design and procedure

In Study 1, a single-factor (ocular servicescape: thematic vs. Non-thematic) between-subject design is conducted. This study manipulated the ocular servicescape in different style of front desk by laboratory experiment. To manipulate

Table 1 Correlation matrix, reliability estimates, and descriptive statistic

Measures	OS1	OS2	OS3	OS4	OS5	OS6	OS7	PA1	PH1	PH2	PH3	PH4	PH5	PH6	PH7	WTP-PP1	WTP-PP2	WTP-PP3
OS1	1																	
OS2	0.12	1																
OS3	-0.20	-0.19	1															
OS4	-0.03	0.08	-0.27	1														
OS5	0.23	0.30	-0.30	-0.21	1													
OS6	0.35	0.25	-0.33	-0.09	-0.17	1												
OS7	0.42	-0.19	-0.24	0.40	-0.03	0.59	1											
PA1	-0.17	-0.18	-0.19	0.26	-0.05	-0.57	0.28	1										
PH1	-0.24	-0.06	0.17	0.33	-0.12	-0.07	0.45	-0.43	1									
PH2	0.14	0.09	0.23	-0.15	-0.25	-0.24	-0.25	-0.50	0.27	1								
PH3	0.42	0.19	0.30	-0.23	-0.23	-0.18	-0.30	-0.14	0.19	0.19	1							
PH4	0.22	0.31	-0.26	-0.21	0.13	0.45	-0.29	0.26	-0.23	0.09	-0.36	1						
PH5	0.14	0.25	-0.16	-0.23	0.14	-0.23	-0.21	0.55	-0.19	0.15	-0.19	0.23	1					
PH6	-0.13	0.07	-0.18	0.04	0.27	-0.15	-0.13	-0.42	-0.30	-0.28	-0.23	-0.02	0.17	1				
PH7	-0.28	0.16	-0.12	0.12	0.50	0.17	0.50	-0.40	-0.50	-0.54	0.37	-0.05	0.19	-0.50	1			
WTP-PP1	0.30	-0.05	-0.20	0.25	-0.52	0.19	-0.45	0.18	0.27	-0.42	0.22	-0.22	-0.20	0.30	0.33	1		
WTP-PP2	0.43	-0.22	0.19	-0.30	-0.35	-0.43	-0.32	0.43	-0.30	-0.31	0.09	-0.12	0.13	0.16	0.21	-0.25	1	
WTP-PP3	0.21	-0.13	0.24	-0.09	0.38	-0.30	-0.31	0.09	-0.09	-0.26	-0.21	0.21	0.30	0.25	0.17	-0.10	0.10	1
α	0.94	0.89	0.91	0.82	0.87	0.84	0.90	0.90	0.90	0.85	0.86	0.93	0.90	0.91	0.86	0.83	0.83	0.84
CR	0.87	0.82	0.79	0.85	0.79	0.85	0.82	0.81	0.85	0.82	0.88	0.80	0.78	0.92	0.80	0.82	0.86	0.92
AVE	0.56	0.57	0.54	0.59	0.65	0.75	0.55	0.69	0.72	0.68	0.67	0.69	0.73	0.78	0.58	0.55	0.66	0.65
Mean	5.21	4.18	5.89	5.11	5.05	5.10	4.98	5.09	5.02	5.17	5.47	5.15	5.97	4.05	5.07	5.28	5.11	4.17
SD	0.387	0.492	0.581	0.432	0.397	0.428	1.106	1.210	0.712	0.388	0.538	0.274	0.452	1.148	1.322	1.095	0.620	0.413

individuals' visual perception of the style of front desk, this study first of all gathered several photos of front desk from the official websites of the luxury hotel in Macao. The front desks in the photos should look thematic or non-thematic. In order to ensure that the photos represent what it is intended to represent, this study chose two photos for each style and invited a group of 30 undergraduate student volunteers viewed both of the two photos in a random order. After viewing each photo, they rated the degree of thematic to which each photograph depicts what it is intended to represent on a seven-point Likert scale (i.e. 1 = "strongly disagree"; 7 = "strongly agree"). Results indicate that both of the two photos of the front desk do represent the two styles.

This experiment runs in the end of November, 2023. Local university students are invited as the respondents. They are good fit for the experiment since they have basic understanding regarding the ocular servicescape of front desk and most of the students are major in tourism and hospitality thus are familiar with those hotels. Participants were promised that the experiment was completely anonymous and their responses would only be utilized for academic purposes. All participants ($n=248$) were assigned to one of the two groups of thematic and non-thematic design style of front desk respectively in a random way. The first group included 124 participants, while the second had the same numbers of respondents. In the stimuli, those respondents are asked to observe the photos of front desk (without employees and consumers) which illustrated different styles for two minutes. Then they complete the questionnaires of perception of ocular servicescape and willingness-to pay price premium through the QR code sent to their smartphone immediately. Also, their demographic profiles was noted at the end of the questionnaire. The dependent variable of this study is customer willingness-to-pay price premium. The age and gender as control variables in this experiment and most of them are the age between 18 and 22 years with equal gender segmentation.

Pretest and result

A pretest is conducted to check whether the manipulation of ocular servicescape of thematic or non-thematic style of front desk in this study is successful. 50 university students are invited to the pretest. According to the findings, the thematic front desk was regarded substantially more appealing than the non-thematic one ($M_{\text{thematic}}=5.69$, $M_{\text{non-thematic}}=5.06$, $t=6.204$, $p<0.001$). Hence, the manipulation was successful.

Among the 248 valid responses of the main test, the gender distribution is equal that almost the same numbers of female respondents (51.5%) and male (49.5%) answered the questionnaire; 52.5% were 20 or younger, while 47.5% are

between the ages of 21 and 22. In particular, 90% of them had at least one night stay in those luxury hotels in Macao. Their demographic information is as below Table 2.

The main effect of front desk's ocular servicescape on those respondents' willingness-to-pay price premium is examined using one-way ANOVA with age and gender as control variables. The findings revealed that visual aesthetics of non-thematic design front desk led to higher customer willingness-to-pay price premium than the thematic one ($M_{\text{non-thematic}}=5.59$, $M_{\text{thematic}}=4.17$, $F(1, 23)=4.091$, $p<0.05$). That is, consumers' visual aesthetics of ocular servicescape of the front desk positively affects on their willingness-to-pay price premium among luxury hotel. Thus, H1 was supported. The result of this test is demonstrated as Fig. 2:

Study 2

In this study, the consumers are supposed to be around the front desk and have encountered to the employee who is going to provide service to them. Therefore, a lab experiment is conducted in order to evaluate the indirect effects of the two transaction-specific satisfaction components of employee performance which are employees' physical attractiveness and their hospitableness as the moderator and mediator in respectively to the main effect of consumers' perceived ocular servicescape of the front desk and their willingness-to-pay price premium of luxury hotel. Therefore, it will be divided into two sub-studies which named study 2a for the evaluation of the moderator of employees' physical attractiveness and the study 2b for the assessment of the mediator of employees' hospitableness.

Study 2a

Experiment design and procedure To further test Hypothesis 2, a 2×2 (ocular servicescape: thematic vs. non-thematic \times physical attractiveness: high vs. Moderate) experiment was designed. The manipulation of the consumers' perceived ocular servicescape of the front desk in luxury hotel follows up the same criteria of study 1. Since facial appearance is the most important aspect of physical attractiveness, which is used to manipulate employees' physical attractiveness (Çivire et al., 2013). This study followed Fisher and Ma (2014) and gathered several male and female ID photos of employees who are working in front desk through the support of the local luxury hotel's human resource managers with the promise that only are used for this study with confidential announcement to all of the respondents and researchers, including the research assistants. In order to get rid of the potential influence of the uniform they wear, this study selected a few same-size photos with employees wearing

Table 2 Respondents' demographic information

Items	Classification	Percentage (%)
Gender	Female	49.5
	Male	51.5
Age	18–20	52.5
	21–22	47.5
Consumption experience of luxury hotel in Macao	Once	90%
	More than once	5%
	Never	5%

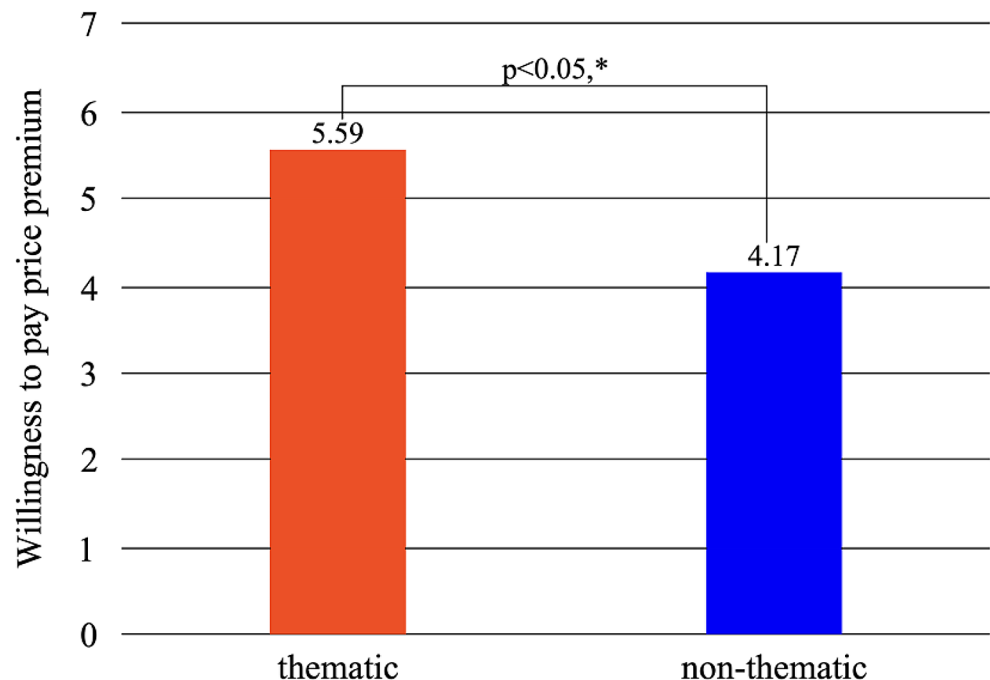
the Western black suit and white shirt and the background of the photos are all white. Finally, one male photo and one female photo who look moderate-attractive and another two photos of female and male who look much more attractive are selected. To avoid the effect of skin tone, this study adjusted all of the photos are in black-and-white photo style. After confirmation of the validity of the manipulation through the scale evaluation by university students of the three independent variables, the main test is conducted. The dependent variable is the willingness-to-pay price premium which was assessed to use the same measurement as in Study (1) Age and gender are collected as control variables. The experiment for the moderation effect assessment of employee's physical attractiveness is performed after the Study 1 in 2023. This study followed up the experimental design by (Fang et al., 2020; Fisher & Ma, 2014) and only used female photos in Study (2) Participants were then randomly shown one of the two photos in A4 size. The same photo was presented again following the scenario description in

the questionnaire. In the stimuli, participants were asked to imagine that they were at a front desk in different style, and then one employee (with the pretested photo showed after the description) came to serve them. After reading this scenario, participants rated the attractiveness of the employee they met. Four experimental groups were created by the two forms of manipulation. 60 university students from every group are invited to participate in the study. 240 students therefore participated in the experiment.

The research was carried out group-by-group basis. After collecting 60 questions from one group, another experimental scenario was offered to collect 60 questionnaires from another group. The research purpose of this study has been explained to the participants before the main test start in order to avoid their attempts to guess the purpose of the experiment which could affect the research results. After they see the employee photographs and observe the front desk photos from study 1, participants are told to complete the questionnaires of consumers' perceived ocular service-scape, physical attractiveness and willingness to pay price premium in this study. Valid questionnaires were collected from 235 of the 240 invited participants.

Pretest and result The reliability and validity of the measurement scales displayed as Table 3. Factor loadings, Conbach's alphas, Composite reliability(CR), RhoA and Average variance extracted (AVE) were used to assess convergence validity. The loading values were higher than 0.70 (Hair et al., 2016). CR and alpha values were above 0.70 (Hair et al., 2013). AVE above the threshold of 0.50 (Hair et

Fig. 2 The main effect of consumers' perceived ocular servicescape and willingness to pay price



al., 2013). Rho A values of more than 0.70 (Henseler et al., 2016). The results showed convergent validity were reliable.

Among the 235 valid responses of the main test, the gender distribution is equal that almost the same numbers of female respondents (54.8%) and male (45.2%) answered the questionnaire; 51% were 20 or younger, while 49% are between the ages of 21 and 22. In particular, 85% of them had at least one night stay in those luxury hotels in Macao. Their demographic information is as below Table 4:

An ANOVA was first performed to determine whether the success of the manipulation of the two independent variables. According to the results (Fig. 3), participants ranked the non-thematic design style of front desk while has high physical attractive employee significantly higher than the others as the Mean value are 5.79 ($M_{\text{thematic}}=4.92$), 5.15 ($M_{\text{moderate}}=4.05$) respectively. These results indicated that the manipulations are all successful.

As shown in Fig. 3, when the employees' physical attractiveness was high, the willingness-to-pay price premium for the respondents who are assigned to ocular servicescape of non-thematic style of front desk is significantly higher than the thematic style group (Mean difference = 0.78, $p < 0.05$). On the other side, the intention of willingness-to-pay price premium is significantly higher for the respondents in the group of thematic style of front desk than the non-thematic style group when the employees' physical attractiveness was moderate (Mean difference = 0.37, $p < 0.05$). Hence, supporting Hypothesis 2.

Table 3 Results of validity analysis

Factors	loading	α	rho A	CR	AVE
Ocular servicescape		0.855	0.926	0.944	0.792
VA1	0.835				
VA2	0.830				
VA3	0.892				
VA4	0.829				
VA5	0.694				
VA6	0.723				
VA7	0.802				
Perceived physical attractiveness of employee		0.825	0.905	0.923	0.815
PA1	0.868				
Willingness-to-pay price premium		0.802	0.814	0.855	0.637
WTP-PP1	0.809				
WTP-PP2	0.856				
WTP-PP3	0.698				

Table 4 Respondents' demographic information

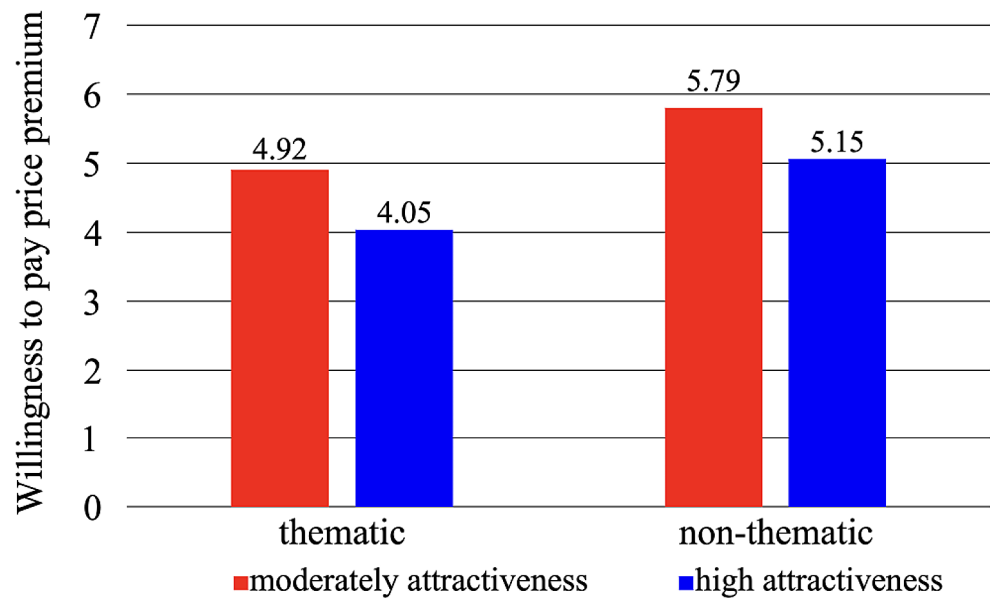
Items	Classification	Percentage (%)
Gender	Female	54.8
	Male	45.2
Age	18–20	51
	21–22	49
Consumption experience of luxury hotel in Macao	Once	78%
	More than once	17%
	Never	5%

Study 2b: employ hospitableness

Experiment design and procedure To further test Hypothesis 3, a 2×2 (perceived hospitableness: high vs. low \times physical attractiveness: high vs. Moderate) experiment was designed. The manipulation of the consumers' perceived attractiveness follows up the same criteria of study 2a. After confirmation of the validity of the manipulation through the scale evaluation by university students of the two independent variables, the main test is conducted. The dependent variable is the willingness-to-pay price premium which was assessed to use the same measurement as in Study 1 and 2a. Age and gender are collected as control variables. The experiment for the mediation effect assessment of employee's hospitableness is performed after the Study 2a in 2023. In the stimuli, participants were asked to imagine that they were at a front desk of luxury hotel, and then one employee (with the pretested photo showed after the description) came to serve them. Furthermore, a written description of the servicescape is manipulated to evaluate the mediation effect of employees' hospitableness and the participant are university students, who plays the role of a luxury hotel customer waiting to check-in while the reserved guestroom is not ready yet in the start part of the questionnaire (Appendix 1).

After reading this scenario, the participants follow the same answer process of the questionnaire of perceived hospitableness and willingness to pay price premium. Four experimental groups were created by the two forms of manipulation. 80 university students from every group are invited to participate in the study. 320 students therefore participated in the experiment. This study also is carried out group-by-group basis as study 2a. Valid questionnaires were collected from 314 of the 320 invited participants. The demographic information of this respondents in this study is as below Table 5 illustrated:

Meanwhile, the reliability and validity of the measurement scales displayed as Table 6. The factor loadings, Conbach's alphas, Composite reliability(CR), RhoA and Average variance extracted (AVE) indicated the measurements have reliable convergence validity since the loading

Fig. 3 Moderating effect of employee physical attractiveness

values, CR, alpha, Rho A values were higher than 0.70 (Hair et al., 2016) and AVE above the threshold of 0.50 (Hair et al., 2013).

Pretest and result The manipulation of perceive hospitableness of service employees was successful. Through an independent sample t-test, highly hospitable employees were rated more positively than the low hospitable ones ($M_{\text{high}} = 5.29$, $M_{\text{low}} = 3.22$), $t = -11.340$, $df = 324$, $p < 0.001$. This study first of all examined the main effect through ANOVA and found that the consumers' perception of ocular servicescape of non-thematic style elicited significant higher customer willingness to pay price premium than they observe thematic style front desk ($M_{\text{thematic}} = 3.03$, $M_{\text{non-thematic}} = 3.92$), $F(1, 210) = 10.095$, $p < 0.05$. To check the mediating effect of perceive hospitableness, this study used the Bootstrapping method through Process version 2.16.3 (Hayes et al., 2014) to enter model 4 and generated 5000 bootstraps based on the 314 observations with a 95% confidence interval.

As shown in Table 7, the results showed that the effect of consumers' perception of ocular servicescape on employees' perceived hospitableness was significant. The effect of perceived hospitableness on customer willingness to pay price premium was also significant. More importantly, the indirect effect of perceive hospitableness was significant. After controlling for perceive hospitableness, the direct effect of consumers' perception of ocular servicescape on consumers' willingness to pay price premium was not significant ($p > 0.05$). Thus, it implies that played a fully mediating role. H3 was supported.

Table 5 Respondents' demographic information

Items	Classification	Percentage (%)
Gender	Female	52.8
	Male	47.2
Age	18–20	51
	21–22	49
Consumption experience of luxury hotel in Macao	Once	78%
	More than once	10%
	Never	12%

Supplement study of the effect of hospitality service aesthetics and consumers' willingness to pay price premium

Research design and procedure

This study has adopted a cross-sectional descriptive research design for the supplement study in order to provide a comprehensive and detailed explanation of the relationships amongst the hospitality service aesthetics of front desk and consumers' willingness to pay price premium to luxury hotel. The samples were selected using a purposive method of sampling. Regarding the sample size, as proposed by Sekaran and Bougie (2016) that sample size more than 30 and less than 500 are appropriate. Since the total number of luxury hotel consumers' data in Macao was not available, the largest proposed sample 384 plus 10% non-return or incomplete or useless rate; the sample size has become 422. Hence, the questionnaire was disseminated to a total sample of 422 consumers from mainland China in December 2023

Table 6 Results of validity analysis

Factors	loading	α	rho_A	CR	AVE
Ocular servicescape		0.857	0.916	0.943	0.702
VA1	0.815				
VA2	0.803				
VA3	0.824				
VA4	0.892				
VA5	0.790				
VA6	0.833				
VA7	0.872				
Perceived physical attractiveness of employee		0.925	0.815	0.836	0.8763
PA1	0.794				
Perceived employee hospitableness		0.853	0.955	0.903	0.853
PH1	0.818				
PH2	0.758				
PH3	0.802				
PH4	0.845				
PH5	0.811				
PH6	0.830				
PH7	0.819				
Willingness-to-pay price premium		0.829	0.802	0.804	0.777
WTP-PP1	0.829				
WTP-PP2	0.862				
WTP-PP3	0.798				

and finally obtains 398 valid responses. Their demographic is demonstrated as Table 8.

Meanwhile, following the development of the research instrument with additional questions to identify the demographic and travel characteristics of luxury hotel consumers in Macao, the instrument was converted into Chinese. Then questionnaires were handed to consumers who have both the service experience of the front desk in thematic or non-thematic style. In order to make the consumers to have easier answer, the Venetian and the Parisian are selected as the examples of thematic setting while the MGM and the Regent are belonged to non-thematic sites. The returned questionnaires were roughly observed and checked for their appropriateness. Then the valid questionnaires were process by using a SEM (structural equation modeling) approach by using AMOS 24 (Anderson & Gerbing, 1988). Before testing the structural model, the construct validity and reliability were evaluated through Cronbach's alpha, CR and AVE

(Fornell & Larcker, 1981) as the study 1 and 2 and indicated qualified result as appeared in Table 9.

Result

Based on the regression weight for the paths proposed in the conceptual model as shown in Table 10, the main effect of consumers' perception of ocular servicescape of front desk to their willingness to pay price premium is identified ($\beta=0.118$, $p<0.001$). This study then ran a bootstrapping of specific indirect effects by reference to Hayes (2009) in order to identify unique indirect effect for the mediation role of perceive hospitableness. It has been found that the consumers' perceive hospitableness plays a full mediating role in the association of the main effect; accordingly the result from the study 2b is confirmed.

The moderated paths analysis finding demonstrated that the perceived employees' physical attractiveness had effects on the relationship of the main effect ($\beta=0.721$, $p<0.001$), implying that the perceived physical attractiveness dampens the main effect relationship. Consequently, the result from study 2a as confirmed.

Conclusions and implication

Discussion

This research concentrated on the influence of the consumers' aesthetic perception among the front desk of luxury hotel in both physical beauty and the employee performance on their willingness to pay more. Through a mixed method approach of both lab experiment and field investigation, this study test three hypotheses regarding the direct and indirect effects of the three aesthetic perception components, including ocular servicescape of front desk in different style, employees' physical attractiveness and their hospitableness to the consumers' willingness-to-pay price premium.

First of all, the ocular servicescape of the front desk in different design style and its effect on on consumers' willingness-to-pay price premium as the main effect is evaluated. Supported by the lab experiment of the consumers' visual aesthetics of front desk in the luxury hotels in Macao, it has been revealed that consumers' visual servicescape of front desk affect their willingness-to-pay price premium. This is particularly true to the luxury hotel industry that much

Table 7 Mediating effect of perceived hospitableness testing

	Direct effect			Indirect effect		
	Coefficient	LLCI	ULCI	Coefficient	LLCI	ULCI
Perceive ocular servicescape -Willingness to pay price premium	0.1069	−0.0932	0.2987	0.3948	0.2239	0.4597
Perceive ocular servicescape- Perceive hospitableness	0.7921	0.4982	1.1239			
Perceive hospitableness-Willingness to pay price premium	0.4988	0.3984	0.6025			

Table 8 Demographic information of respondents

Items	Classification	Percentage (%)
Gender	Female	49
	Male	51
Age	18–25	28.6
	26–35	33.4
	36–45	22
	46–55	12.5
	56 or older	2.5
Individual monthly income (MOP) (MOP8=US\$1)	Up to 10,000	23.2
	10,001–20,000	25.8
	20,001–30,000	22.2
	30,001–40,000	13.2
	Over 40,000	15.4
Education background	Up to high school	24.3
	Junior college	17.3
	Bachelor	45.8
	Postgraduate	12.6
Consumption experience	Once	32.3
	More than once	53.3
	Never	14.4

efforts are spent on the construction of the physical beauty of the servicescape in order to affect guests' positive experience construction and premium payment decision (Alfakhri et al., 2018; Lin & Worthley, 2012; Lin, 2016; Mumcu & Kimzan, 2015). This result thus indicated that the physical beauty of the servicescape is not just an aesthetic process but an economic attribute to demonstrate the concept of luxury for the guests to have value added since the high price charge by luxury hotel (Huh et al., 2019).

Meanwhile, in relative to these previous studies which main concentrated on the consumers' overall perception of the whole servicescape of the hotel, the front desk as the particular key site of the hotel public space that not only is the visual focus but also is the central service space for guests, this research identified the necessity of the beauty of front desk as one of the important transaction-specification satisfaction components for consumers' positive behavioral intention. This study also provided additional evidence that the physical beauty of the front desk can increase consumers' willingness-to-pay price premium given the differentiate design style. Specifically, the experiment result indicated compared to the thematic style front desk, consumers clearly prefers more to the non-thematic style and thus induced more significant effect on their willingness-to-pay price premium. For the luxury hotel consumers who are hedonic leisure dominated, the non-thematic style of front desk could be more modern, exciting and special for them.

This study also obtained insights into the concept of servicescape of front desk and its effect to consumers'

willingness-to-pay price premium from the employee performance. As demonstrated by the lab experiment in Study 2, consumers are more likely to willingness-to-pay price premium during service interactions in the non-thematic front desk while the facial attractiveness of the employee is high. While this result is opposite in the context of thematic style front desk that the consumers seem can accept the employees' moderate physical attractiveness. This result for one thing has identified the stereotype of the “what is beautiful is good” in the front desk employee aspect. For another, in relative to the previous research result which has identified the single link between employees' physical attractiveness and consumers' response (Luoh & Tsaur, 2009; Soderlund & Julander, 2009), this finding implied that consumers' positive behavioral intention to the themed front desk which is constituted various symbolic attributes of certain cultural context seems less attractive as usual since it only illustrate its significance when the employee facial appearance is relative low. In other words, despite either physical setting or the employees facial attractiveness can induce consumers' positive behavioral intention, the non-thematic front desk has relative high potentiality to be linked with such intention if the employees are not high attractive.

Table 9 Results of validity analysis

Factors	loading	α	rho_A	CR	AVE
Ocular servicescape		0.872	0.906	0.843	0.601
VA1	0.852				
VA2	0.833				
VA3	0.834				
VA4	0.802				
VA5	0.800				
VA6	0.813				
VA7	0.879				
Perceived physical attractiveness of employee		0.905	0.852	0.826	0.863
PA1	0.784				
Perceived employee hospitableness		0.823	0.915	0.932	0.753
PH1	0.823				
PH2	0.798				
PH3	0.822				
PH4	0.825				
PH5	0.851				
PH6	0.836				
PH7	0.829				
Willingness-to-pay price premium		0.819	0.842	0.814	0.779
WTP-PP1	0.729				
WTP-PP2	0.762				
WTP-PP3	0.788				
Measurement model fit index	$\chi^2/df=1.78$; RMSEA=0.049; CFI=0.92; GFI=0.90; TLI=0.91				

Table 10 Supplement study result of direct, indirect and overall effect

Mediation effect	Direct effect			Indirect effect		
	Coefficient	LLCI	ULCI	Coefficient	LLCI	ULCI
Perceive ocular servicescape -Willingness to pay price premium	0.1069	−0.0932	0.2987	0.3948	0.2239	0.4597
Perceive ocular servicescape- Perceive hospitableness	0.7921	0.4982	1.1239			
Perceive hospitableness-Willingness to pay price premium	0.4988	0.3984	0.6025			
Moderation effect						
Perceive ocular servicescape	0.09, $P=0.827(0.39)$					
Perceive physical attractiveness	0.08*, $P=0.043(0.04)$					
Perceive ocular servicescape×Perceive physical attractiveness	0.01*, $P=0.018(1.02)$					
Constant	6.12***, $P=0.000(0.67)$					
R ² overall	0.25***, $P=0.000$					
X ² Δ R ²	8.37*, $P=0.034(3.02)$					

Consumers' willingness to pay price premium is the dependent variable. Cluster-robust standard errors are shown in parentheses. * $P<0.05$; ** $P<0.01$; *** $P<0.001$

In addition, when the another humanistic cue of the employees' hospitableness as the representation of bodily appeal is added in the main effect as the mediator, the result of H3 is full supported the research prediction. This study showed that the influence of employees' physical attractiveness on customer willingness-to-pay price premium can be explained by their hospitableness in the front desk context. Meanwhile, the respondents illustrated different reaction to high attractive employees when taking both the visual aesthetic of front desk and the employees' hospitableness into consideration to discuss their willingness-to-pay price premium. It suggests that the relationship between employees' physical attractiveness and their willingness-to-pay price premium could not always hold true. This study also revealed that the moderating influence of employees' physical attractiveness on customers' willingness-to-pay price premium does not exist in the situation of high hospitableness.

Theoretical contribution

The hospitality literature aims to comprehend the association between consumers' behavioral intention and the effect of its environmental aesthetic antecedents in the period that people have a strong affinity for beauty and seek experiences that are aesthetically arousing (Pappa, 2020). The discourse on beauty although has sparked a large forum of discussion on what individuals valuation of beauty are formed in philosophical aspect (Hart, 1971). While much of the focus to investigate aesthetics from an empirical standpoint in contemporary hospitality academic research (e.g. Horng & Hsu, 2020; Kim et al., 2020; Zhang & Xu, 2020; Yan et al., 2019) commonly focus on a single whole sector (e.g., restaurant) or site without considering the certain tourism hospitality setting. Furthermore, they also fail to account for the socio-cultural context that embodies human cognitions (Roth & Jornet, 2013).

This research addressed the literature void by taking Adorno's (1997) classical theory on aesthetics as the theoretical underpinning with the integration of the transaction-specific satisfaction theory to explore the aesthetic perception on consumers' willingness to pay price premium among front desk in luxury hotel. Based on the Adorno's philosophical perspective on aesthetics focuses on the autonomous, socially determined, critical, and mimetic character of art and beauty. On one hand, the findings of consumers' perception among front desk in both ocular servicescape and humanistic presentation evidence that beauty is an autonomous reflection of one's subjective evaluation (Adorno, 1997) no matter the design style or employees' physical attractiveness which are considered to possess aesthetic value to patrons.

On the other side, what is considered beautiful in the context of aesthetic process in luxury hotel context has been identified its social determination, which supports Adorno's interpretation of this issue that "Art is mediated by the social totality, more exactly by the dominant structure therein" (1997, p. 300). Front desk of luxury hotel as an artistic work which is designed and created with much efforts, the beauty perception by consumers regarding it is socially shaped, especially when discussing the different style of front desk about thematic embellishment and its effect on consumers' willingness to pay price premium, as the findings show. On one hand, for the Chinese consumers as the research target of this study, cultural appeals which manifest in different elements conjure the front desk an image of European-flavored attraction that possesses symbolic meaning of such a place. However, this kind of thematic culturally rich oasis did not illustrate the expect effect on consumers' behavioral intention as prediction.

With respect to the humanistic presentation of employees' beauty and furthermore, their bodily appeal in the service process, employees' physical attractiveness, this study indicated that in some degree it has become part of the

subjective aesthetic expression which is the same interpretation as consumers to other real-world objects.

Although the viewers of the employees' physical attractiveness has social consensus about beauty or ugly. The current research revealed that consumers have already illustrated difference of the beauty of employees and "situating the affinity at a deeper level than surface similarity" (Heynen & Adorno, 1992, p. 83) as modern-day consumers have very different personal aesthetic standards and often appreciate resemblance between objects. More importantly, the findings invoke that physical attractiveness's effect on consumers' willingness to pay price premium could be influenced by employee performance aspect of hospitableness.

Managerial implication

The findings of this study have direct management insights for luxury hoteliers, that is how to stimulate their guests to pay for the price premium. As the aesthetics of the servicecape of luxury hotel has already become an ever more important part of the value added point, an effective communication of more innovation to the visual landscape design of the front desk rather than pure replication or reproduction of architectural magnificence which can meets the current consumers' hedonic leisure pursuit is of paramount importance to induce the consumers' value obtain feeling and would like to pay more for such physical servicecape.

Meanwhile, in relative to the current popular arrangement of the employee of front desk who must has high attractive facial appearance, our study of the employees' physical attractiveness and hospitableness demonstrate 'what is beautiful is good' does not necessarily have a beneficial influence on consumers' positive response. In the luxury hotel industry, managers should be more mindful of the impact of physical attractiveness since their guests have high emphasis of the hospitality elements in the front desk section. Therefore, it suggests that luxury hotel practitioners need to develop different customer willingness-to-pay price premium strategies based on the hospitableness improvement, such as the service expertise level, and personalized service provision. For front desk section which is small but so important for the whole hotel operation and face with different tasks, requirements and situations, it is in fact a highly-specialized work environment, practitioners need to be explicit that customers pay more attention on professional excellent attitude and service skills rather than on the beautiful appearance in both of physical setting and employee facial attractiveness.

Research limitation and future research directions

The present study has limitations. First, this study only take two independent variables which represent the hospitality service aesthetic in both ocular servicecape and humanistic presentation in front desk, further research is expected to employ other relevant factors to have in-depth study of the aesthetic influence to consumers' response, such as the facility spectacle and architectonic magnificence. Secondly, the field survey in this study although was conducted in the actual luxury hotels of a specific region, the respondents of the field survey are the consumers but only the guests from mainland China. Therefore, to guarantee the reliability of the results, it is necessary to conduct a future replication study by collecting responses from luxury hotel consumers with diverse demographic distributions. Furthermore, future research can examine the willingness-to-pay price premium of luxury hotel consumers through interdisciplinary study of the tourism management and economy to reveal what and how the specific amount that consumers are willing to pay as a premium for the service aesthetics in luxury hotel through CVM assessment.

Meanwhile, regarding the visual aesthetics of luxury hotel front desk, this study only take two different styles of the front desk into consideration and the respondents are all Chinese students. It is highly encouraged that the further study could address this issue from the cross-cultural aspect to explore the potential difference of consumers' visual aesthetic and its effect. For example, although it belongs to the same luxury hotel brand, the Four seasons hotels in different Chinese cities demonstrated both Chinese classical and Western modern design style, which could enrich the experiment setting. And it is clear that consumers with different cultural background are deserved to be analyzed of this issue in the future as well.

On the other side, this study only considers consumers' visual aesthetics of the luxury hotel front desk while consumers actually also have perception derived from other sensory ways such as listening to music and smelling the fragrance of luxury hotel (Denizci et al., 2019; Guzel & Dortyol, 2016). Future research should add to our information about consumers' other sensory experiences in the current study framework to evaluate the further effects from consumers' perception of servicecape in luxury hotels. Furthermore, this study only pursues the economic benefits of consumers' visual aesthetics of the servicecape for luxury hotel, while the ultimate goal of human beings in the tourism and hospitality experience is to maintain an acceptable level of well-being (Meng & Choi, 2017). Thus future research should pay more attention to evaluating whether visual aesthetics will contribute to the well-being of consumers.

Conclusion

Based on the integration of aesthetic theory and transaction-specific satisfaction theory, this study provides insights into the impact of consumers' aesthetic perceptions among specific and important service section in luxury hotel which is the front desk and employee performance on willingness-to-pay price premium through a combination of laboratory experiments and field surveys. The findings show that consumers' perceptions of the aesthetics of front desk's ocular-servicescape has direct significant influence on their willingness-to-pay price premium of luxury hotel. Additionally, field surveys of the consumers' response to front desk employee performance revealed that consumers were more willingness-to-pay price premium for perceived hospitableness and physical attractiveness, especially during service interactions at non-themed front desk. However, their performance when they are in themed front desks shows the opposite effect. It was also found that the effect of employees' physical attractiveness on willingness-to-pay price premium could be explained by the level of perceived hospitableness of employees in the front desk setting. For those employees who exhibit high levels of hospitableness, they were able to attenuate the effect of physical attractiveness on willingness-to-pay price premium. Overall, this study fills the research gap on the impact of hotel front desk aesthetic perception on consumer behavioral intention in price premium payment and provides practical insights for the luxury hotel industrial practitioners.

Appendix 1

Imagine that you are at front desk of a luxury hotel to wait for check-in while the room you reserved is not ready yet. So you ask the staff of front desk, "Excuse me, could you help me to find another guestroom of the same level?"

In the high hospitableness condition, the receptionist says, "I'm sorry, the room you reserved is cleaning now. Please have a rest in the nearby couch and I will let you know if the room is ready" Then the receptionist take you to the lobby couch to sit for wait and then contacted with housekeeping department about the progress of the room. A few minutes later the receptionist replied you the room is ready with sincerely apologies.

In the low hospitableness condition, the receptionist says, "I'm sorry for this. But I'm new here and I am not sure when the room cleaning will be completed. The other receptionists are having lunch now. Please wait over there for a moment and come back later".

Appendix 2

Table 11 Questionnaire-for field survey of luxury hotel consumers

Items	Strongly disagree (1)	Dis-agree (2)	Nor-mal (3)	Agree (4)	Strongly Agree (5)
Ocular servicescape: from the observation of the photos of front desks, I can feel					
OS1: complexity					
OS2: typicality					
OS3: familiarity					
OS4: visual scale					
OS5: coherence					
OS6: legibility					
OS7: mystery					
Physical attractiveness					
PA1: What do you think of the physical attractiveness of the service employee?					
Perceive hospitableness					
PH1Hosp1: I felt wel- come at the front desk					
PH2: The front desk manager were kind					
PH3: The first-line employees were kind					
PH4: The front desk manager displayed a genuine desire to please					
PH5: The first-line employees displayed a genuine desire to please					
PH6: The front desk manager treated me with respect					
PH7: The first-line employees treated me with respect					
Willingness to pay price premium					
WTP-PP1: I am willing to pay a higher price for this luxury hotel than for others					
WTP-PP2: I am will- ing to pay a lot more for this luxury hotel than others					
WTP-PP3: I am will- ing to pay more for this luxury hotel brand over other brands of luxury hotels					

Demographic information-for luxury hotel consumers

- 1, Gender: F _____ M _____
- 2, Age: 18-25 _____ 26-35 _____ 36-45 _____ 46-55 _____ 55 or older _____
- 3, Individual monthly income: Up to 10000 _____ 10001-20000 _____ 20001-30000 _____ 30,001-40000 _____ Over 40000 _____.
- 4, Education background: Up to high school _____ Junior college _____ Bachelor _____ Post graduate _____.
- 5, Consumption experience: once _____ more than once _____ never _____

Demographic information-for students.

- 1, Gender: F _____ M _____
- 2, Age: 18-20 _____ 21-22 _____
- 3, Consumption experience: once _____ more than once _____ never _____

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Declarations

Ethical approval This article does not contain any studies with human participants performed by any of the authors.

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