The Effect of Hotel Livestreaming on Viewers' Purchase Intention: Exploring the Role of Parasocial Interaction and Emotional Engagement

Abstract

Livestreaming is an important marketing channel that could create viewers' emotional engagement with hotels and hence boost purchase. Parasocial interaction theory explains imagined social relationships and interactions with people who are distant from us and who do not reciprocate individual communication or interest. The introduction of parasocial interaction and purchase intention into the context of livestreaming enriches the literature on this important global phenomenon. Drawing from similarity attraction theory and parasocial interaction theory, the antecedents and purchase intention of viewers who interacted with the hosts of livestreaming programmes run by hotels were examined. Data from a survey of 348 individuals who had watched hotel livestreaming programmes were analysed using PLS-SEM. A model to explain the effects of hotel livestreaming on viewers' purchase intentions was proposed and tested. The findings indicated that the viewers' self-congruence and value congruence with the hosts of livestreaming programmes enhanced their parasocial interaction, which in turn strengthened their emotional engagement and purchase intention. A viewer's emotional engagement with a livestreaming programme was found to mediate the effect of their parasocial interaction and as a result influence on their purchase intention. Moreover, findings suggest that hotels need to create opportunities for livestreaming through events and should amplify user-generated content communications through livestreaming to support emotional engagement and boost bookings.

Keywords: Livestreaming; self-congruity; value congruence; emotional engagement; parasocial interaction; purchase intention

1. Introduction

In the past five years, livestreaming has rapidly emerged as a new means of information exchange at the global scale. Livestreaming has also provided a new

channel for the marketing and promotion of numerous businesses. Livestreaming platforms, such as TikTok, Tiger T, and Taobao, have accumulated massive followers. Livestreaming is evidently becoming a global phenomenon.

Livestreaming applications have been among the most widely used online platforms for social interaction throughout the coronavirus disease 2019 (COVID-19) pandemic (Jahrir & Tahir, 2020). Many educational institutions have adopted livestreaming technology to facilitate the delivery of online teaching (Liu et al., 2018). Approximately 80% of consumers prefer livestreaming to blogs (Kevin, 2018). Social media platforms, such as Snapchat and Instagram, have also recently added new livestreaming functions.

In addition to entertainment, such as reality shows and e-sports events, livestreaming is popularly used in brand marketing, the showcasing of traditional culture and advanced technologies, and open government meetings and court proceedings (Romli et al., 2021).

The hotel industry marketing is at a critical turning point in the COVID-19 and has had to rapidly transit from offline to online marketing activities/channels (Bilgihan & Bujisic, 2015), such as website market (Chan & Guillet, 2011) and social media apps (Facebook and Twitter) (Leung et al., 2015) to adapt itself to a resilient model of online sales. Some hotels have introduced in-house health and disinfection measures and have promoted their web presence around these images (Liu et al., 2021) The online marketing approach of live streaming has, however, become an emerging mainstream platform in the wake of the outbreak.

In this context, studies of hotel livestreaming hold their urgence and importance. Findings also have a crucial role to play in the subsequent development of the hospitality industry marketing and how to build resilience during and after disasters and epidemics. Many hotels and resorts have turned to the latest popular online entertainment trend-live streaming. For instance, some have established collaborations with celebrities and famous hosts, who act as guides to introduce the hotel or resort's services and the latest promotions (Lau, 2020). Ctrip, a popular online travel agency,

has generated sales of nearly 400 million RMB from conducting 11 livestreaming sessions for hotels with which it has collaborated (Jie, 2020). Wanda Vista Hotel and Yalong Bay Mangrove Tree Resort have also established livestreaming programmes (Jie, 2020). Fliggy, another online travel agency, has established a 'live' option for the selection of hotels on its website. This allows customers to interact with a host, who guides them in their selection of hotels and explains different hotels' check-in procedures (Kai, 2016),

Thus far, research on hotels' use of livestreaming for e-commerce has only sought to investigate how livestreaming is used to attract the attention of potential customers. In comparison, there remains limited knowledge on the effects of livestreaming on consumers' buying intention for hotel services. More focused research integrating theories of social psychology and marketing may address this key knowledge gap. Further, the hospitality industry relies heavily on the interactive experience and personal service. Livestreaming hence has its advantages in serving as an effective and interactive online marketing tool in real time in the hotel sector. Therefore, the hotel industry was applied to study the livestreaming based on the parasocial interaction features.

Consumer purchase intention is a fundamental concept in marketing theory and has been closely related to the use of social media within the hotel industry. Research on the use of various social media by hotels has examined its messaging strategies (Leung et al., 2017), online reviews for hotels (Kim et al., 2015), the social commerce platform (Xiang et al., 2016), and the role of social media in influencing consumers' decisions to make hotel reservations (Varkaris & Neuhofer, 2017). However, limited studies have comprehensively investigated whether and how hotels' use of livestreaming may influence consumer purchase intentions. It also remains unclear how the distinct features of livestreaming – that is, that of 'nowness' (Buhalis & Sinarta, 2019) and an imagined intimacy through parasocial interaction – may influence such a relationship.

Parasocial interaction explains imagined social relationships and interactions with people who are distant from us and who do not reciprocate individual communication or interest (Stever, 2017). The concept of parasocial interaction is rooted in theory on media and communication. In its application to the broad context of consumer behaviour, parasocial interaction explains how a consumer's perceptions and behaviours – including their purchase behaviour – is influenced by their imagined intimacy, friendship, and identification with another individual (Kim et al., 2015; Sokolova & Kefi, 2020). Research on parasocial interaction in social media has mainly focused on interactions between consumers and virtual individuals (i.e., official accounts and collective digital avatars. In comparison, few studies have been conducted on real-time interactions between actual individuals, such as the interactions between the hosts and viewers of livestreaming. Moreover, it remains unclear how viewers are attracted to interact with the hosts of livestreaming programmes, and how such interactions can lead to future intentions to purchase the promoted services.

Similarity-Attraction theory suggests that the similarity between two people can cause mutual attraction. Therefore, similarity can be a prerequisite for causing interaction. Similarity in values and personality between the livestreaming hosts and the viewer may cause more parasocial interaction (Byrne & Nelson, 1965). Self-congruity and value congruence represent such antecedent variables of parasocial interaction because they represent the similarity between viewers and the livestreaming hosts. However, the exploration regarding how self-congruity and value congruence influence parasocial interaction and hence the purchase intention is still limited (Ye et al., 2021). This study aims to address the above knowledge gaps by examining the effect of livestreaming within the hotel industry and by applying theories of parasocial interaction and similarity attraction. Specifically, the roles of self-congruity, value congruence, parasocial interaction, and emotional engagement in influencing the purchase intentions of livestreaming programme viewers of hotels are determined. The aims of this study are as follows: (i) to explore the effects of self-congruity and value congruence on livestreaming parasocial interaction; (ii) to investigate the effect of livestreaming parasocial interaction on emotional engagement; (iii) to examine the effect of emotional engagement on purchase intention; and (iv) to reveal the role of emotional engagement in mediating the relationship between livestreaming parasocial interaction and purchase intention.

This study makes several significant contributions to marketing. First, the role of livestreaming is examined in shaping parasocial interactions. This topic has not been addressed in the literature on hotels and marketing thus far, despite the fact that livestreaming influencers have attracted considerable research interest. Second, this research complements the parasocial interaction theory by identifying the roles that characters and values of the viewers and hosts play in livestreaming parasocial interaction. Lastly, this study theoretically and empirically substantiates the connotation of parasocial interaction by revealing the antecedents and consequences of parasocial interaction in live sales of hotels. In addition to their theoretical contributions, the findings of this study provide valuable insights for the management of online marketing initiatives by hotels in both typical and post-pandemic scenarios.

2. Literature Review

2.1 Live Streaming

Web 2.0 user-generated content (UGC), is influencing the decision-making process of Internet users and the online marketing strategies. Studies have found a significant relationship between UGC and consumer purchase behavior (Au et al., 2014). Especially in the hospitality industry, online sales and UGC are inextricably linked. For example, consumers posting or sharing content related to the brand, or having conversations related to the brand experience, facilitate hotels to discover consumers who meet their consumption criteria (Buhalis & Sinarta, 2019) and segment the consumer population. UGC plays an essential role in social media influence. Since UGC provides clear credentials for organizations and enables consumers to state their opinions, users could freely write comments, discuss and review products and services (Buhalis & Inversini, 2014). Social media is presented in increasingly diverse forms and has generated various effects on consumer behaviour. Livestreaming is a new platform carrying UGC, and also an embodiment of UGC (Pires & Simon, 2015). In livestreaming, the nature of UGC is more dynamic, instant, and interactive. Therefore, this study investigates live streaming to understand such unique effect of UGC on online sale of hotels.

Livestreaming has grown rapidly in the wake of the epidemic, with the total number of people watching livestreaming having reached 562 million in 2020, according to CNIC data (Centre, 2020), which has also received the attention of many scholars.

There are many divisions of livestreaming, and scholars' research in the field of livestreaming mainly focuses on, live gaming (Wongkitrungrueng et al., 2020; Xue & Liu, 2022), live online education (Lu et al., 2018), shopping livestreaming (Xu et al., 2020), and chat type livestreaming (Yousukkee & Wisitpongphan, 2021). It is often mentioned in marketing. Xu et al. (2020) studied the relationship between live broadcasting and impulse consumption. Livestreaming is also being used extensively in the tourism. Deng et al. (2019) asserts that livestreaming tourism (LST) is considered as a unique information and communication technology (ICT) phenomenon. The study sheds light on live streaming tourism, to develop a systematic review on livestreaming tourism, and proposed the blended tourism experiences cape model to address the absence of livestreaming tourism from a theoretical perspective. Deng et al. (2021) further explored live tourism and affordances theory is used to understand some of the key features and benefits of TLS. It is argued that TLS affordances include temporal, spatial, interactive, and media affordances. In the tourism industry, live streaming of hotels is also of interest, but few scholars in the existing literature have conducted research on livestreaming of hotels (Deng et al., 2021). Ye et al. (2021) examined the overall impacts of coronavirus disease COVID-19 pandemic in China's hotel industry and defines livestreaming as a new channel of sales. This study has taken livestreaming hotel as the research context to explore the development of hotel in under the epidemic through value congruence, self-congruity, parasocial interaction, emotional engagement and purchase intention, thereafter provides suggestions for the development of the hotel industry after the epidemic.

2.2 The effect of Self-congruity on parasocial interaction and purchase intention

Early studies on self-congruity focused on the consistency between consumers' self-images and their choice of products (Lindquist & Sirgy, 2009). Sirgy (1986) proposed that individuals use brands or products to express themselves, and often choose brands or products that can improve their self-image. Self-congruity is a psychological process and the result of psychological activity in which the consumer contrasts two factors. This was later extended to the influential relationship between self-congruity and

consumer behavior (Sirgy et al., 1991). Consumer self-concept as a measure of brand personality or appeal, and consumers also consider whether the brand personality matches their self-image when making purchase decisions (Sirgy, 2018), leading to a shift from comparison with one's behavior to comparison with external characteristics. Krishen and Sirgy (2016) suggested that consumers develop brand preferences when they tend to agree on a celebrity image that matches their ideal self-image. Therefore, self-congruity theory covers several areas in addition to the marketing field. Chon (1992) used the self-congruity theory in tourism to investigate the consistency between self-image and destination image. With the rapidly increased popularity of social media, self-congruity is often used in the social media sphere to study the consistency of online celebrity images with those of their followers (Wang et al., 2015). Luna-Cortés et al (2019) examined the effects of self-congruity on social relationships in virtual networks. Following the definition of self-congruity in recent social media literature, this study examines the extent to which the audience image is consistent with the live streaming host's image. In this study, self-congruity is defined as the audience can identify whether their own self-image is consistent with that of live streaming hosts (Wang et al., 2015).

The measurement of self-congruity could be single dimension and multi dimensions. The one-dimensional view is mainly applied in employee-organization, individual-business and social media domains (Wang et al., 2015). Multidimensional aspect is dominantly used in the marketing field, including brand-customer alignment and endorser-brand alignment (He & Mukherjee, 2007). Grubb and Hupp (1968) believed that self-congruity could be understood as a single dimension. Hosany and Martin (2012) considered self-congruity to include the 'actual self' and the 'ideal self'. Anand and Kaur (2018) divided self-congruity into four dimensions: the 'actual self', the 'ideal self', the 'social self', and the 'ideal social self'.

The concept of parasocial interaction originated in the field of psychiatry. It was subsequently applied to the field of communication, mainly in research on the relationships between television programmes and their audiences (Rubin & McHugh, 1987). In line with social and technological developments, the theory of parasocial

interaction has been applied to the field of social media. In recent years, scholars have used this theory to investigate the effects of social media on their users e.g. (Zheng et al., 2020). For instance, Sokolova and Kefi (2020) proposed that parasocial interaction characterise the relationships between social media users. Specifically, parasocial interaction generates the illusion that 'real' interpersonal relationships exist among different users. Other studies have suggested that parasocial interaction explain the intimate relationships that viewers of livestreaming programmes unilaterally imagine themselves to share with the hosts of those programmes (Ye et al., 2021).

In this study, the similarity attraction theory (Byrne & Nelson, 1965) is applied to examine the influence of self-congruity on parasocial interaction. The hypothesis predicts that an individual's self-congruity and ideal congruity resemblance influence their attraction to TV characters (Wetzel & Insko, 1982). Hoye and Turban (2015) observed that the personal qualities of employees interact to affect an organisation's overall attractiveness. Likewise, Turner (1993) found that parasocial interaction emerges when the performers on television programmes and their viewers share similar attitudes. Similarly, the viewers of livestreaming programmes may form positive attitudes and even intimate relationships with hosts whom they consider sharing similar self-image as themselves. Xu et al. (2020) studied the interaction between the broadcasting company and the audience. Through the use of different social media platforms, fans of a livestreaming host are continuously exposed to the details of that individual's life, and they may even have the opportunity to interact directly with that individual (Colliander & Dahlén, 2011). Based on the above arguments, it is expected the self-congruity of viewers of livestreaming programmes to influence the actual intimacy they maintain – as well as the illusion of intimacy that they perceive to maintain–with the hosts of those programmes (Luoma-aho et al., 2019). Accordingly, the following two hypotheses are proposed:

H1: A viewer's self-congruity with a host positively affects their purchase intention.

H2: A viewer's self-congruity with a host positively affects their parasocial interaction with that host.

2.3 The effect of value congruence on parasocial interaction and purchase intention

First proposed by Zucker (1987), the concept of value congruence stems from the 'fit theory of man and the environment'. Value congruence refers to the similarity between the values held by individuals and organisations (Chatman, 1989). Additionally, Edwards and Cable (2009) defined value congruence as 'general beliefs' about the importance of normative behaviour or the final state. In this study, value congruence is defined as the extent to which a viewer of a livestreaming programme considers the values of the host to be in line with their own (Ye et al., 2021). Studies have investigated the value congruence between individuals and organisations (Williams et al., 2012) and between employees and their leaders (Byza et al., 2019). Byza et al. (2019) used three items to measure the value congruence between an individual and their organisation. In a study on social media, Ye et al. (2021) used three items to measure the self-consistency between tourism companies and their followers on social media.

Ayeh et al. (2013) found that an individual's perceived validity of a source as well as their subsequent attitude and intention to use user-generated content (UGC) were impacted by UGC contributors and focus customers. These findings can be explained by similarity attraction theory, which states that individuals with specific personality characteristics are more likely to be attracted to organisations that display the same characteristics. Research on the consistency of an individual's values or needs has tended to directly conceptualise the impact of their attractiveness (Centre, 2020). Similarly, we infer that value congruence with a spokesperson on social media may lead to consumers' positive attitudes and enhance their behavioural intentions. Turner (1993) discovered that similarity in attitude between television actors and the viewer encourages parasocial interaction. Customers are also likely to acquire a good attitude, even if they have a sense of closeness akin to their own social media representative with personality. Recent studies have shown that the viewers of YouTube blogs form parasocial interaction with the hosts of those blogs (Lee & Watkins, 2016). Ye et al. (2021) proposed that viewers' perceived similarity and value congruence with spokespersons on social media lead to the formation of parasocial interaction, as self-congruity and value congruence positively affect consumer behaviours (Corley et al., 2012; Yang et al., 2020). Yu et al. (2013) demonstrated that the self-congruity of a promoter on an online shopping website influences consumers' purchase intention.

Accordingly, it is expected a viewer's perceived value congruence with a livestreaming host to influence their purchase intention. Furthermore, Cazier et al. (2017) showed that both value congruence and online trust directly affect a consumer's purchase intention and reservation price. Accordingly, the following two hypotheses are proposed:

H3: A viewer's value congruence with a livestreaming host positively affects their parasocial interaction with the host.

H4: A viewer's value congruence with a livestreaming host positively affects their purchase intention.

2.4 Parasocial interaction and purchase intention

According to Fishbein and Ajzen (1977), purchase intention is a measure of the possibility of purchase behaviour. It is also defined as the conscious plan or intention of a consumer to purchase a product or service The nature of purchase intention as well as the factors affecting purchase intention have been examined in a variety of research contexts. Zeithaml (1988) proposed that a consumer's perceived value directly affects their purchase intention, which includes 'possible purchase', 'want to purchase', and 'will consider purchase'. Hutter et al. (2013) and Alalwan (2018) examined how individuals' purchase intentions are influenced by their use of social media. Likewise, Abzari et al. (2014) explored the impact of social media on individuals' brand attitudes and purchase intentions.

Studies on consumer purchase intention have mainly examined the relationships between individuals' parasocial interaction, their online consumption, and their online purchase behaviour. Social media platforms, such as Facebook, Twitter, Instagram, and YouTube, have been gaining an increasing number of users. Lee and Watkins (2016) contended that parasocial interaction between YouTube bloggers and their followers positively affect luxury brand cognition. More and more evidence shows that consumers on these platforms are prone to impulse buying due to social interaction (Xiang et al., 2016). Specifically, through parasocial interaction, followers develop a sense of intimacy with bloggers; this expressive and conceptual perception of intimacy subsequently motivates followers to purchase products. Kim et al. (2015) argued that a parasocial interaction is a prerequisite for an individual's willingness to make a purchase. Hwang and Zhang (2018) found that the parasocial interactions of followers

are positively correlated with their purchase intentions. Accordingly, the following hypothesis is proposed:

H5: A viewer's parasocial interaction with a livestreaming host positively affects their purchase intention.

2.5 Parasocial interaction and emotional engagement

Emotional engagement plays an important role in changing an individual's behaviour (Johns, 2012). Fredricks et al. (2004) supports that Emotional engagement refers to 'a person's emotional response when undertaking a specific task'. In the context of the present study (i.e., livestreaming), emotional engagement refers to the extent to which a viewer of a livestreaming programme feels an emotional connection with and is able to express their emotions to the host and other viewers of the programme (Guo, 2018). Emotional engagement can develop in livestreaming because by interacting with the content of the programme as well as other viewers through instant chat, a viewer can develop an alternative experience (Lim et al., 2020) and an emotional connection with the host of the programme.

Emotional engagement is the factor that most significantly distinguishes the experience of watching a livestreaming programme from that of watching a programme on television, YouTube, or other non-interactive online platforms. In livestreaming programmes, viewers' emotional engagement is stimulated through their observations of other viewers' emotional inputs (Lim et al., 2020). Emotional engagement is most likely to develop when a viewer of a livestreaming programme has access to a fast-paced, interactive chat environment. Such an environment allows the viewer to feel an emotional connection with others, and it encourages the viewer to express their emotions in response to the content of the programme or the behaviours of other viewers.

Parasocial interaction involves affective devotion (Giles, 2020; Schramm & Wirth, 2010; Tsiotsou, 2015), which produces a positive affective outcome (Auter & Palmgreen, 2000). Taylor (2011) claimed that parasocial interaction with the subjects of television programmes may help the audience members to perceive reality and facilitate their emotional responses. Similarly, the parasocial interaction among users

of Twitter (that are influenced by their attention, interests, opinions, and relationships) have been shown to facilitate their empathic responses and strengthen their emotional contagion (Yuksel & Labrecque, 2016). In other words, when the relationship between two individuals improves, their emotions, thoughts, and behaviours are more likely to align (Davis & Rusbult, 2001). Ou et al. (2020) supported that engagement has a degree of influence on behaviour.5In another study of social media, Liu et al. (2019) showed that individuals' brand emotions were positively affected by their parasocial interaction with the subjects of the vlogs that they followed. Based on previous findings, it can be predicted that viewers of livestreaming programmes are more likely to develop positive emotions when they establish more intimate parasocial interaction with the hosts of those programmes. Accordingly, the following hypothesis is proposed:

H6: A viewer's parasocial interaction with a livestreaming host positively affects their emotional engagement.

2.6 Emotional engagement and purchase intention

A number of previous studies have investigated the relationship between engagement and purchase intention (Jiménez-Castillo & Sánchez-Fernández, 2019). Ou et al. (2020) examined the relationship between organizational attributes of casinos and customer engagement, categorized service environment and customer engagement as individual level, attitudinal loyalty, and behavioral loyalty to the organizational level, by answering how organizational strategies influence customer engagement and determining the impact of this influence on customer behavior. The results show that the service environment emanates direct and moderating effects on customer engagement. This study demonstrates a symbiotic view of customer engagement and provides a more comprehensive understanding of the role of customer engagement in the service environment at the individual and organizational levels. Jiménez-Castillo and Sánchez-Fernández (2019) defines the role of digital influencers in brand recommendation, examining their impact on engagement, expected value and in the research of purchase intention, taking brand engagement as the intermediary variable,

in this study, the relationship between persistent influential, expected brand value and intention to purchase recommended brands is also discussed. The results show that brand engagement in self-concept improves the expected value of the brand, and these two variables also affect the intention to buy recommended brands. Parasocial interaction promotes emotions associated with the brand, which enhances positive brand attitudes, which may help increase the likelihood of future purchases (Davis et al., 2020; Liu et al., 2018). Emotion plays an important role in determining the relationships between individuals and the relationships that individuals form with objects (Hosany et al., 2020). Yan et al. (2016) argued that consumer judgments are a combination of emotional valence, emotional arousal, and ad-induced arousal and emotions can influence consumer behavior in judgments, which also suggests that emotions may be one of the important antecedents that influence consumer behavior. The expressive and conceptual proximity that users of social media feel they share with prominent spokespersons (e.g., 'influencers') may motivate them to purchase products (Kim et al., 2015). An individual's sense of proximity to another individual may be affected by their degree of emotional engagement. Specifically, as the degree of emotional engagement increases, the proximity strengthens. Organization and identification with members and problem-solving ability positively affected an individual's emotional attachment, which in turn influenced their willingness to provide information and triggered their behavioural changes (Kim & Kim, 2021). In one study focusing on the hotel industry, it was found that consumers' emotional links with a hotel can affect their specific purchase behaviour, such as their responses to the hotel's promotion and publicity campaigns (Han et al., 2014). Hosany et al. (2020) showed that cooperative behaviour can emerge when consumers are emotionally attached to the goods they purchase. Accordingly, the following hypothesis is proposed:

H7: A viewer's emotional engagement positively affects their purchase intention.

2.7 Mediating roles of emotional engagement and parasocial interaction

An individual's emotional engagement may mediate the relationship between their parasocial interaction and their purchase intention, as their parasocial interaction during livestreaming can variably affect their emotions. Davis et al. (2020) showed that improving an individual's emotional regulation and emotional clarity can help to reduce their anger and subsequently to reduce their compulsive intention. Specifically, under different circumstances, changes in emotion can alter an individual's attitude and even their intention. Parasocial interaction has shown to be a strong determinant of emotional engagement (Yuksel & Labrecque, 2016) and purchase intention (Han et al., 2014). In livestreaming, an increase in interaction with the host will likely induce positive emotions in the viewer; this may lead to the development of an emotional connection between the viewer and the host. In the decision-making process on information sharing, an individual's 'emotional connection' with information is regarded as the basic element of consumer sharing (Kang et al., 2020). As a mediating variable, emotional participation regulates changes in purchase intention. Positive emotions will further strengthen purchase intentions. Parasocial interaction also reflect the 'friendship' between followers and influencers (Chen et al., 2021). As indicated above, the self-congruity and value congruence between viewers and hosts of livestreams have an impact on their social interaction, which in turn affects their emotional engagement and purchase intentions. In addition to these views, it is proposed that self-congruity and value congruence on parasocial interaction. Parasocial interaction can regulate the effect of self-congruity and value congruence on purchase intention，as well as the impact of emotional engagement can regulate the impact of parasocial interaction on purchase intention. Therefore, Hypothesis 8 is proposed as follows to indicate this mediating effect:

H8: Viewers' emotional engagement mediates the relationship between parasocial interaction and purchase intention.
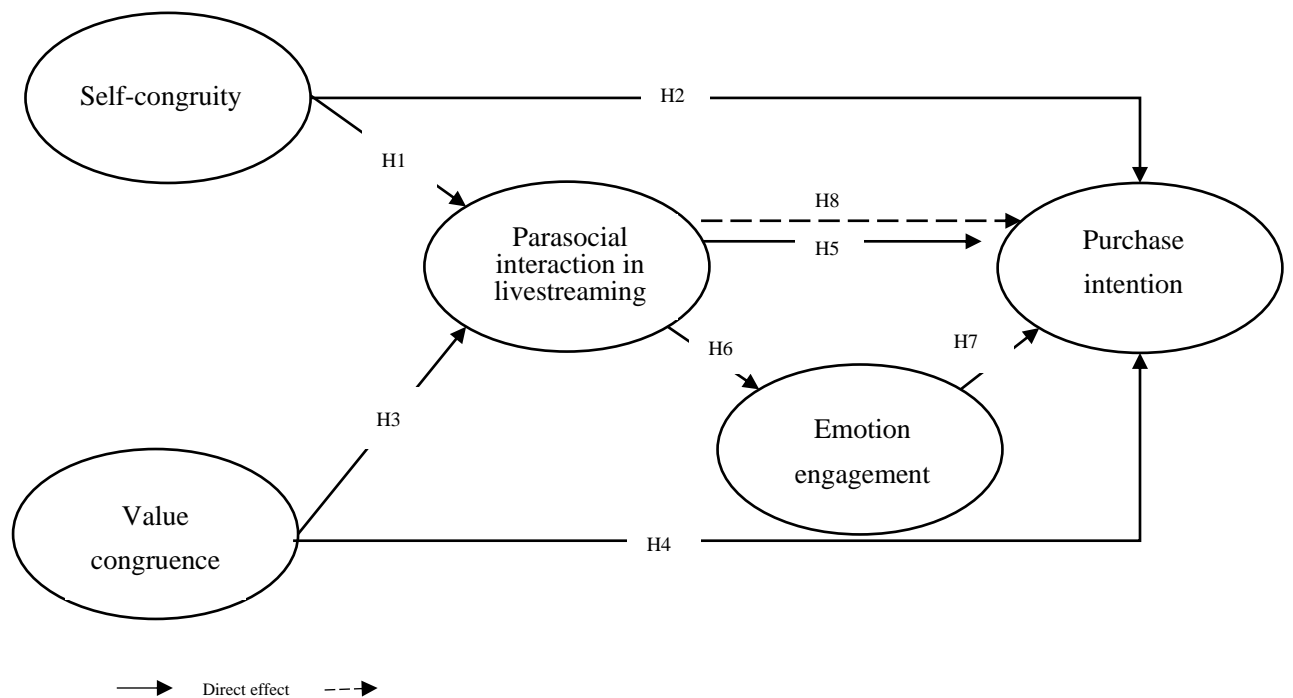
Fig.1. Proposed research model

3. Research Method

3.1 Research context

A quantitative approach is adopted, which focuses on the online viewers of hotel livestreaming programmes. Signs show that most viewers favour livestreaming for its vivid, interactive, and realistic features. Live broadcasting improves consumers' willingness to buy online by reducing psychological distance and perceived uncertainty (Zhang et al., 2020). The sudden and rapid outbreak of COVID-19 has led to temporary closures in the real economy, which have facilitated the development of livestreaming sales. The relationships were explored between the viewers of hotel livestreaming programmes and their purchase intentions from the aspects of self-congruity, value congruence, parasocial interaction, and emotional engagement.

3.2 Questionnaire development and measurements

A survey questionnaire was developed to obtain the quantitative data. The questionnaire was divided into three sections. The first section contained screening questions, which were designed to identify qualified participants for the study. To qualify for the study, an individual had to have watched at least one of the hotel's livestreaming programmes in the past 2 months. The second section included 26 questions and their corresponding 7-point Likert-type scale answers. The questions assessed the five constructs of the proposed framework, including their self-congruity, value congruence, parasocial interaction, emotional engagement, and purchase intention.

The study was conducted using a questionnaire survey that was designed for users of livestreaming services and that was based on established scales for measuring scales in earlier research. Self-congruity was measured using six items developed by Wang et al. (2015). An example item was 'Concerning our characters, this blogger and I are very similar'. Value congruence was measured by three items formulated by Jung and Avolio (2000). A sample item was 'I really support the intent of the core values of the spokesperson'. Nine-item measurements of parasocial interaction were adopted and modified from Kim and Kim (2017) and Rubin et al. (1985). A sample item was 'The spokesperson makes me feel comfortable as if I am with a friend'. The scale of emotional engagement carrying the four items was adapted from Kim et al. (2015) and Kim et al. (2020). A sample item was 'I expressed my feelings about the hotel live-streamer or hotel in live-streaming chats'. Lastly, a scale composed of three items was derived to analyse purchase intention which is developed by Alalwan (2018) and Duffett (2015). A sample item was 'I desire to buy products that are promoted on advertisements on social media'. Research has demonstrated that all of the scales used in this study are reliable and valid. All items were rated on a 7-point scale that ranged from 'strongly disagree' (1) to 'strongly agree' (7).

The final section of the questionnaire comprised questions about the demographic backgrounds of the participants. Here, the participants' profiles and social features were elicited through a series of questions. As the questionnaire was originally designed in English, to facilitate its distribution to online respondents, the questionnaire was translated into Chinese through the back-translation technique and the translated Chinese and English versions of the questionnaire were sent to two senior researchers in hotels to ensure the accuracy. Ten individuals, including employees from the hotel industry and customers who watched the live streaming of hotels before were invited

to form a panel to review the questionnaire and provide suggestions on modification. According to panel review, the length and expression of the questionnaire were slightly modified, especially in terms of expressiveness and consistency of translation. For example, one item designed for measuring emotion engagement revising from 'I expressed my feelings about the announcer or commentator' to 'I expressed my feelings about the hotel live-streamer or hotel in livestreaming chats'. This is more suitable for Chinese expression and more applicable to the hospitality industry livestreaming. A pilot test with 120 participants was conducted in February 2021. All 26 items held satisfactory factors loading above 0.5 on their corresponding factors. The appropriateness of the factor analysis was subsequently tested using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. An acceptable KMO value of 0.952 and a significant Bartlett's test of sphericity ($p < 0.000$) were obtained, thereby verifying the existence of a sufficient number of correlations among the variable. The Cronbach's alpha for each factor ranged from 0.86 to 0.926, indicating favorable internal reliability for the factors. The results met expectations and made sufficient preparations for formal research.

3.3 Sampling, data collection, and analysis

The questionnaires were distributed online, and the data was collected in May 2021 on WEN JUAN XING (www.wjx.cn) platform. It is one of the largest platforms for collecting online survey data in China, and a professional online survey, evaluation, and voting platform with nearly 50 million users in China (Liu, et al., 2021). The reliability of data has been confirmed by previous studies (Sun et al., 2019). To reduce the likelihood of common method variance, according to the recommendation of Tehseen et al. (2017), data was collected at different times and during different channels. The online survey questionnaire was distributed through various hotel livestreaming fan groups. The group is made up of viewers who watch the hotel livestreaming. The questionnaires were distributed at different times for each group, during May 2021 on three separate occasions. The study first conducted a purposive sampling to ensure that the respondents were Mainland Chinese viewers who had watched the hotel live streaming within the last year. The convenience sampling was then implemented at a later stage to recruit more qualified samples. By implementing this sampling approach, it is noted that the demographics of respondents are consistent with those of the Chinese

live-streaming report. According to the first quarter of 2021 China online live industry user distribution report, in terms of age distribution, 64.2% of users are between 24-35 years old and more than 50% of the overall users have a college degree as well as a bachelor's degree (iiMediaResearch, 2021), indicating a representative sample collected in this study.

Hair et al. (2011) asserted that the sample size should exceed 10 times the number of estimated variables to generate reliable results on structure equation modelling. Adhering to this guide, the target sample size for our survey was 348, given that the total number of items was 26. Of the 348 questionnaires ,40 questionnaires were invalid. Among the remaining 308 usable responses, the effective rate was 89%.

The data was analysed using partial least squares structural equation modelling (PLS-SEM). This approach is known to provide a significant advantage when dealing with complex models and exploratory research (Hair et al., 2011). PLS-SEM uses a nonparametric bootstrap procedure (Davison & Hinkley, 1997) to test the significance of estimated path coefficients (SmartPLS, 2021). Descriptive analysis was performed to generate the respondents' demographic profiles as well as the descriptive information for all variables. Confirmatory composite analysis was conducted to confirm the measurement models in PLS-SEM using the composite-based method (Hair Jr et al., 2020). The internal reliability of the constructs was examined using composite reliability (CR) and ρAs. Convergent and discriminant validities were used to test the validity of all constructs. After testing the measurement model, SEM was applied to examine the specific hypotheses.

4. Results

4.1 Respondents' demographics

Table 1 summarises the demographic information of the respondents. There were similar proportions of men and women in the sample. Individuals between the ages of 18 and 40 accounted for the largest proportion of users. Similar proportions of users were below the age of 18 and over the age of 60, also accounting for a minority. In terms of their educational backgrounds, 23.4% of users were college students, while another 13.8% of users were junior college students. These patterns were in line with the general demographics of users of social media. Students constituted the largest

portion of users; this was expected as they have relatively flexible schedules. Most viewers had between 6 months and 1 year of experience with livestreaming. The trends broadly reflected the effects of the ongoing COVID-19 pandemic in stimulating the demand for livestreaming for e-commerce.

Table 1 Respondent profiles (n=308)

Variable	Category	Frequency	%
Gender	Male	123	40
	Female	185	60
Age	18 or below	1	1
	18-25	172	56
	26-30	74	21.2
	31-40	45	14.7
	41-50	15	4
	Above50	1	3
Education	High school degree or below	54	8.8
	College Diploma	85	13.8
	Bachelor's degree	144	23.4
	Master's degree or above	25	4.1
Personal Annual Income	2000 or below	73	23.7
(Unit: RMB)	2001-4000	60	19.5
	4001-6000	76	24.7
	6001-8000	44	14.3
	8001-10000	24	7.8
	Above10000	31	10
Occupation	Student	107	34.7
	Private owners	133	43.2
	Enterprise staff	56	18.2
	retiree	2	0.7
	Freelancer	7	2.27
	Others	3	0.93
Focus on time	6 months or below	124	40.3
	1 year below	84	27.3
	2 years below	42	13.6
	2-3 years	33	10.7
	Above 3 years	25	8.1

4.2 Measurement model

The internal consistency reliability, convergent validity, and discriminant validity of the measurement model (Hair et al., 2011; Henseler et al., 2009) were assessed. The model's internal consistency reliability is evaluated using Cronbach's α and the CR

value. Before the measurement and examination of the structural models, the effect of common method variance is tested by using Harman's single factor score to identify any potential biases that could have been caused by the measurement method (Podsakoff et al., 2012). The total variance explained by the single factor was 49.25% for the sample; this was below the cut-off point of 50%, thus suggesting that common method variance did not affect the result (Min et al., 2016). Table 2 shows that the model's ρAs values ranged from 0.830 to 0.922 and that its CR values ranged from 0.89 to 0.935. According to Cronbach (1951), the minimum threshold for a ρAs value is 0.7, and the ideal value for CR ranges from 0.7 to 0.95. Based on these criteria, the measurement model displayed sufficient internal consistency reliability.

The factor loadings of all 26 items were higher than 0.7 (i.e., 0.701–0.888), which were above the minimum threshold of 0.7 (Chin, 1998), thus indicating that all items had satisfactory convergent validity. As shown in Table 2, all AVE values ranged between 0.589 and 0.741, which were above the minimum threshold of 0.5 (Fornell & Larcker, 1981), again supporting the good convergent validity of the model.

Table 2 Results of confirmatory composite analysis

Factor	Item	Standardized Estimate	ρAs	Composite reliability	Average variance extracted (AVE)
Self-congruity	Concerning our characters, this influencer and I are very similar	0.732	0.864	0.896	0.589
	I resemble the fans of this influencer very much	0.78			
	I can easily identify with this influencer	0.785			
	The ideal of myself is very similar to the character of this influencer	0.742			
	Participating in this influencer, I want to show the best of me	0.815			
	This influencer reflects my ideal self	0.747			
Value congruence	I really support the intent of the core values of the influencer	0.888	0.830	0.896	0.741
	I agree with the core values of the influencer	0.881			
	I have a clear understanding of what the core values of the influencer mean	0.811			
Parasocial interaction	I look forward to watching the influencer in live Streaming	0.805	0.922	0.935	0.614
	If the influencer in live Streaming appeared on another channel, I would watch that live streaming	0.794			
	When I'm watching the influencer, I feel as if I am part of her group	0.778			
	I would like to meet the influencer in person	0.701			
	If there were a story about the influencer in a newspaper or magazine, I would read it	0.776			
	When the influencer shows me how she feels about the hotel, it helps me make up my own mind about the hotel	0.753			
	The influencer makes me feel comfortable, as if I am with a friend	0.822			
	I find the influencer attractive	0.825			

	Visiting the influencer social media site makes me relax	0.793			
Emotion engagement	I quoted the hotel live-streamer or hotel commentator when hotel live-streaming host said something good or witty	0.811	0.835	0.89	0.669
	I expressed my feelings about the hotel live-streamer or hotel in live-streaming chats	0.834			
	sometimes use an emote to the streamer when hotel live streaming host said something good or witty	0.837			
	When I engagement in a hotel live-streaming chat, I feel emotionally connected with users I am chatting with	0.789			
Purchase intention	I will buy the hotel recommended by influencer live streaming	0.864	0.865	0.908	0.712
	I desire to buy hotel products recommended by a live streaming influencer	0.829			
	I am likely to buy hotel products recommended by a live streaming influencer	0.823			
	I plan to purchase hotel products recommended by a live streaming influencer	0.858			

The model's discriminant validity is evaluated using two approaches: a Fornell–Larcker criterion analysis and the heterotrait–monotrait ratio of correlations (HTMT). Table 3 shows that the square roots of the AVEs of each construct were greater than the correlations between constructs (Fornell & Larcker, 1981). Table 4 shows that the HTMT ratios were all lower than 0.85 (Henseler et al., 2015). These two sets of results indicated that the model had satisfactory discriminant validity, showing a good convergent validity for this model. Regarding the model fit in PLS-SEM, attention should be paid to the SRMR and NFI (Hair Jr et al., 2016). In particular, NFI > 0.7 (Wang et al., 2022) and SRMR < 0.08 are considered a good fit. In this study, SRMR is 0.054 and NFI is 0.837, therefore could be considered as a good fit.

Table 3 Latent variable correlation coefficients

	Emotion Engagement	Parasocial interaction	Purchase intention	Self-congruity	Value congruence
Emotion Engagement	0.818*				
Purchase intention	0.666	0.844*			
Parasocial interaction	0.694	0.723	0.784*		
Self-congruity	0.680	0.623	0.745	0.768*	
Value congruence	0.683	0.638	0.699	0.664	0.861*

Note: * refers to the square roots of AVE of the corresponding latent variable

Table 4 Heterotrait – Monotrait Ratio of Correlations (HTMT) Analysis.

	Emotion engagement	Parasocial interaction	Purchase intention	Self-congruity	Value congruence
Emotion engagement					
purchase intention	0.782				
parasocial interaction	0.789	0.809			
Self-congruity	0.797	0.717	0.831		
Value congruence	0.826	0.735	0.800	0.786	

4.3 Structural model

With reference to Hair Jr et al. (2016), four assessments were conducted to evaluate the structure of the model: (i) a test for collinearity, (ii) a test of the significance of the path coefficients, (iii) an examination of the level of coefficients of determination (i.e., the R^2 value) and (iiii) the variance inflation factor (VIF) was used to test for collinearity. The results showed that all VIFs ranged from 1.000 to 1.929. As all of their values were below five, multicollinearity was not an issue in this study (Hair et al., 2011).

Table 5 reports the estimated path coefficients in the model. Specifically, self-congruity (coefficient = 0.505, p = 0.000) and value congruence (coefficient = 0.366, p = 0.000) had positive effects on parasocial interaction. Self-congruity (coefficient = 0.053, p = 0.426) and value congruence (coefficient = 0.149, p = 0.043) also displayed positive effects on purchase intention. parasocial interaction had a positive effect on emotional engagement (coefficient = 0.244, p = 0.000) and purchase intention (coefficient = 0.694, p = 0.000). Finally, emotional engagement had a positive effect on purchase intention (coefficient = 0.411, p = 0.000).

The bootstrapping resampling method was adopted to test the mediating role of emotional engagement in the relationship between parasocial interaction and purchase intention. The resultant interval was less than 0.05, indicating support for the mediating effect of this variable. Table 6 reports the estimates of the specific indirect effects in the structural model. The results indicated that emotional engagement mediated the relationship between parasocial interaction and purchase intention (coefficient = 0.169, p = 0.000). Furthermore, parasocial interaction mediated the relationships between self-congruity and purchase intention (coefficient = 0.207, p = 0.000), value congruence and purchase intention (coefficient = 0.15, p = 0.000), value congruence and emotional engagement (coefficient = 0.235, p = 0.000), and self-congruity and emotional engagement (coefficient = 0.35, p = 0.000). The results show H1, H3, H4, H5, H6, H7and H8 were supported. Figure 2 illustrates the structure of the model, including all of the proposed relationships between the variables and their estimates.

The coefficient of determination (R^2) is used to measure the model's prediction accuracy and to assess the overall effect of all of the external variables on the internal dependent variables. According to Hair et al. (2011) and Henseler et al. (2009), R^2 values of 0.75, 0.50, and 0.25 correspond to significant, moderate, and weak explanatory power, respectively. All R^2 values in our model ranged between 0.481 and 0.631 (emotional engagement R^2 = 0.481, parasocial interaction R^2 = 0.631, and

purchase intention $R^2 = 0.587$). These results indicated that the model had satisfactory prediction accuracy.

Table 5 Path coefficients in the structural model

path	β	t	p	Support
H1 Parasocial interaction<---self-congruity	0.505	9.772	0.000	Yes
H2 Purchase intention<---self-congruity	0.053	0.795	0.426	No
H3 Parasocial interaction<---Value congruence	0.366	6.898	0.000	Yes
H4 Purchase intention<--Value congruence	0.149	2.207	0.043	Yes
H5 Purchase intention<---Parasocial interaction	0.411	5.566	0.000	Yes
H6 Emotion Engagement<---Parasocial interaction	0.694	19.143	0.000	Yes
H7 Purchase intention<---Emotion Engagement	0.243	3.291	0.001	Yes

Table 6 Specific indirect effects in the structural model

| path	β	t	p	Support
Value congruence ->　Parasocial interaction -> Emotion Engagement	0.253	6.271	0.000	Yes
self-congruity -> Parasocial interaction -> Emotion Engagement	0.35	8.674	0.000	Yes
Parasocial interaction -> Emotion Engagement-> Purchase intention	0.169	3.233	0.001	Yes
self-congruity -> Parasocial interaction -> Emotion Engagement-> Purchase intention	0.085	3.048	0.002	Yes
Value congruence ->　Parasocial interaction -> Purchase intention	0.15	4.25	0.000	Yes
Value congruence ->　Parasocial interaction -> Emotion Engagement-> Purchase intention	0.061	2.875	0.004	Yes
self-congruity -> Parasocial interaction ->Purchase intention	0.207	4.848	0.000	Yes
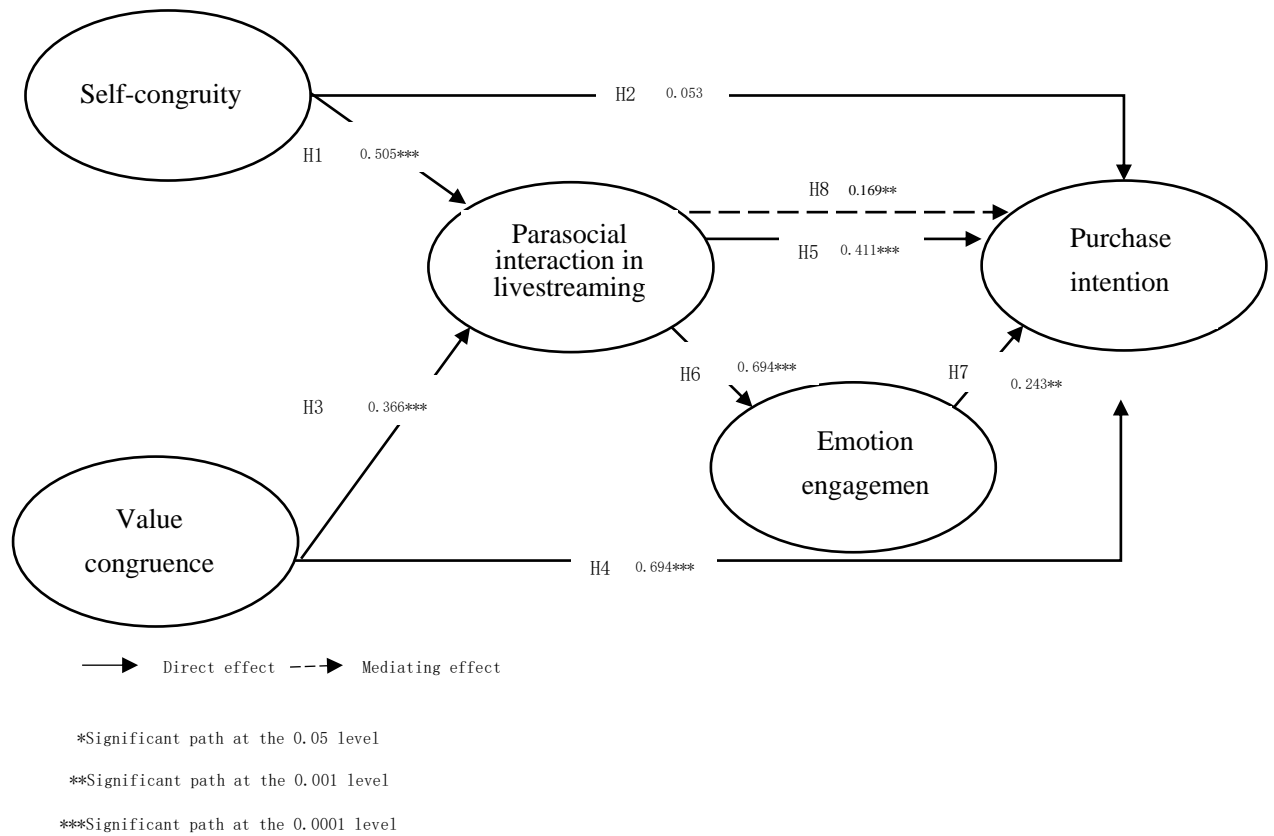
Fig.2. Final structural model with standardized path coefficients

5. Discussion

The virtual economy is altering people's perspectives of different modes of consumption and has brought new development opportunities for the e-commerce industry through the selling of goods in real-time. The COVID-19 pandemic has driven many industries, including the hospitality industry, to shift to the virtual economy. This research contributes to knowledge on the use of a new form of online marketing in the hospitality industry: livestreaming. Through livestreaming, hotels can increase their online sales. Focusing on livestreaming within the context of the hotel industry, parasocial interaction theory and similarity attraction theory were integrated to investigate the relationship between constructs. The results revealed that parasocial interaction and emotional engagement are important factors affecting the purchase

intentions for hotel services among the viewers of livestreaming. In comparison, self-congruity and value congruence are important preconditions for parasocial interaction. It was also found that value congruence can directly affect purchase intention, and parasocial interaction and emotional engagement can enhance purchase intention. Finally, it is showed that emotional engagement mediates the effect of parasocial interaction on purchase intention.

The results evidenced that self-consistency and value congruence are the key factors that can serve to enhance social interactions between the viewers and hosts of online programmes (Lim et al., 2020; Ye et al., 2021). Specifically, increasing consistency between viewers' self-congruity and their value congruence with the hosts of livestreams will enhance their parasocial interaction with those hosts. This result is consistent with McCracken (1989) model of meaning transfer. However, it was also found that the strengthening of parasocial interaction and emotional engagement results in a strengthened emotional engagement and purchase intention, respectively. In this study, similarity attraction theory was used to examine the antecedents and consequences of parasocial interaction between the viewers and hosts of livestreaming programmes which has not been done by other researchers before.

5.1 The effects of self-congruity and value congruence on parasocial interaction

The results indicated that viewers' self-congruity and value congruence positively affect their parasocial interaction with the hosts of livestreaming programmes. Additionally, self-congruity does not directly impact their purchase intention. Value congruence positively affects their purchase intention. Research has suggested that parasocial interaction can occur when individuals share similar self-image or values (Ye et al., 2021). The findings demonstrated these relationships in the context of viewers and hosts of livestreams; during livestreams, similarities in personality between viewers and hosts serve to enhance their interactions. The same relationships are observed in the area of self-congruity; when the value identities of viewers and hosts align, their parasocial interactions are gradually enhanced. The results of this study are

consistent with the findings of Cazier et al. (2017), who argued that value congruence directly impacts purchase intention. Values provide individuals with multiple functions and guide their behaviours and judgment in specific situations (Kahle, 1983). Values have also been shown to affect all aspects of consumer behaviour. For example, one study demonstrated the influence of personal values on individuals' consumption of Indian food in the United Kingdom (Fredricks et al., 2004). In the present study, value congruence also refers to the degree of consistency between the values of the viewers and hosts of livestreaming programmes. This alignment in values can significantly impact the brand attitudes and purchase intentions of consumers (Pradhan et al., 2016). The finding that self-congruity does not directly impact purchase intention contrasts the findings of Malodia et al. (2017). These disparities may be attributed to the different research contexts. Specifically, it is suggested that the findings from studies of online shopping may not apply to livestreaming.

The marketing literature has adequately explained the relationships observed. In various fields and disciplines, self-congruity and value congruence have been shown to impact social interactions. Studies in the field of communication have documented parasocial interactions between websites or virtual characters and fans (Auter, 1992; Kim & Kim, 2017), as well as parasocial interaction between game accounts and players (Lim et al., 2020). This study extends the literature by demonstrating parasocial interactions between the hosts of livestreaming programmes for hotels and their viewers. Furthermore, the result shows that self-congruity and value congruence positively influence these interactions.

5.2 Parasocial interaction and purchase intention

The finding that individuals' parasocial interaction correlates with their purchase intention is consistent with the literature. For instance, previous studies have used theory on parasocial interaction to explain consumers' purchase behaviour in social networks (Hwang & Zhang, 2018; Sokolova & Kefi, 2020). Other studies have shown

that social media influencers who are trustworthy and likeable can effectively shape their followers' attitudes and behaviours towards a specific brand (Lou & Yuan, 2019). Parasocial interaction affects consumers' purchase intention because influencers who are considered by their followers to have good credibility will affect their followers' attitude and behaviour when they review and recommend products (Pinda, 2021). Increasingly, influencers frequently interact with their fans through social media. When the relationship between merchants and audiences becomes closer, the audience will regard merchants as a reliable source of information, thereby affecting the audience's purchase intention (Lee & Watkins, 2016). Therefore, the establishment of a strong relationship of parasocial interaction between the viewers and host of a hotel's livestreaming programme results in those viewers forming a more intimate relationship with the hotel. In turn, this improves the viewers' impression of the hotel and enhances their purchase intention.

5.3 Mediating roles of emotional engagement and parasocial interaction

Results indicate that parasocial interaction mediates the relationships among self-congruity, value congruence, and purchase intention, as well as the relationships among self-congruity, value congruence, and emotional engagement. The nature of an individual's personality and values influence the parasocial interaction they form (Ye et al., 2021). Furthermore, a stronger parasocial interaction increases an individual's purchase intention for specific products (Sokolova & Kefi, 2020). As such interactions increase in frequency, emotions associated with those interactions will gradually accumulate and become enriched over time.

Notably, emotional engagement mediated the association between a viewer's parasocial interaction and purchase intention for a hotel's services. This may happen because the emotional engagement of the viewer and their emotional interaction with the host of the hotel's livestreaming programme caused the viewer to develop a good impression of the hotel. Thereby, their purchase intention for the hotel's services increased. In general, the development of feelings of intimacy would enhance a viewer's positive emotions and motivate them to be emotionally engaged in the livestreaming programme.

Results show that parasocial interaction can not only affect a viewer's emotional engagement with a host of a livestreaming the programme, but also directly and positively affect their purchase intention for the services and products promoted in that programme. Moreover, it is also shown that parasocial interaction positively influences individuals' purchase intention through increasing their emotional engagement. Specifically, parasocial interaction in hotels' livestreaming programmes affects the purchase intention of the viewers for hotel services. Studies have shown that parasocial interaction can influence consumers' perceived credibility (Pinda, 2021), brand attitude (Lin et al., 2021), social capital (Kim et al., 2020), and purchase intention (Kim et al., 2015). The findings contribute to the literature by explaining the relationship between parasocial interaction and purchase intention through the mediating role of emotional engagement and by providing empirical evidence for this relationship. Moreover, it is suggested that an individual's purchase intention for a hotel's services can be enhanced by strengthening their emotional engagements with the hotel's livestreaming programmes.

6. Implications

6.1 Theoretical implications

This research makes several significant contributions to theories. First, based on similarity attraction theory, this study explores the antecedents of parasocial interaction in hotel livestreaming between hosts and viewers. Although there has been recent academic interest in livestreaming, most studies have examined this phenomenon from the perspective of market media. In contrast, the role of livestreaming in generating parasocial interaction has not been fully discussed in the literature on hotels and marketing. Previous work has shown that social and physical attractions on social media are the antecedents of parasocial interaction between users and online celebrities (Zheng et al., 2020). However, limited studies in areas of social psychology have explored the mechanisms by which the hosts of livestreaming programmes influence their viewers. Current results show that viewers who consider livestreaming hosts to possess values and self-congruity that are similar to their own will develop stronger

parasocial interaction with those hosts, which extends the similarity attraction theory to real-time livestreaming activities.

Second, the study complements research of parasocial interaction theory by exploring the characters and values of the viewers and hosts of livestreaming programmes. Previous studies on social interactions have primarily focused on the audiences of television programmes or social media users. This research extends the theory of parasocial interaction to the field of livestreaming, thereby enriching the theoretical understanding of this phenomenon. Research in the field of media studies has shown that two factors lead to the formation of parasocial interactions: social interactions and physical interactions (Kurtin et al., 2018). This study demonstrates that an individual's self-congruity and values also influence their formation of parasocial interaction.

Third, this research extends the literature by exploring the indirect impacts of emotional engagement on the relationship between parasocial interaction and purchase intention. So far, the majority of the studies on parasocial interaction have focused on their direct impacts. The results show that parasocial interaction has both direct and indirect effects on purchase intention. They imply that livestreaming parasocial interaction can directly influence an individual's purchase intention and could also actualise the effect through emotional engagement with the livestreamer.

Lastly, this study theoretically extends and empirically substantiates the connotation of parasocial interaction by revealing its antecedents and consequences in the sales of hotel products and services in real-time as previous studies have mainly focused on websites and spokesmen (Wang & Liu, 2022); none have examined the relationship between parasocial interaction and purchase intention in the context of livestreaming. The present findings therefore advance the theoretical understanding of consumer purchase intention, specifically by showing that it can be strongly influenced by parasocial interaction.

6.2 Practical implications

The results also provide important management implications for the development of hotel online marketing under normal circumstances as well as during the post-COVID-19 pandemic period. First, findings show that parasocial interaction in hotel

livestreaming could enhance individuals' purchase intention. This result can serve as a reference to better planning the marketing strategies of hotels. For example, hotels need to create opportunities for livestreaming through various events and platforms. they should meanwhile amplify the UGC and real-time two-way communication via livestreaming between the target audience and the hotel's representatives. Hotels can also take advantage of various functions on a livestreaming platform – such as direct messaging, comments, posts, replies, likes, and lucky draws – to build such parasocial interaction with its potential customers.

Second, given that self-congruity and value congruence could facilitate interactive behaviours between the viewers and hosts of livestreaming programmes, it is suggested that hotels can enhance these interactions in livestreaming by carefully selecting their livestreaming hosts. For instance, based on its customer profiles, a hotel can employ livestreaming ambassadors or influencers who share similar values and interests to the individuals in its target market. Further, when promoting the hotels through livestreaming, hosts could also emphasise the connection with viewers and hosts to boost more parasocial interactions, hence leading to higher purchase intention.

Finally, findings show that emotional engagement can enhance an individual's purchase intention. Accordingly, hotels can enhance their customers' purchase intention by strengthening their emotional engagement with the hotel's livestreaming programmes. For example, hosts of the hotel's livestreaming programmes can respond to individual viewers' questions during livestreaming while mentioning topics that are likely to interest many viewers. This may generate greater emotional participation from the viewers, improve their in-depth understanding of the hotel's services, and ultimately enhance their intention to purchase these services. Such actions can improve hotels' pre-sale performances, thereby helping to restore the hotel economy.

7. Conclusion, Limitations, and Future Research

Sales of products via livestreaming are key to the sustainable development of the network economy. Since the outbreak of the COVID-19 pandemic, businesses in the hospitality industry have increasingly turned to social media to foster relationships with

their customers. However, the underlying mechanisms that allow such relationships to be built have yet to be uncovered. In this study, theories on parasocial interaction, similarity attraction, and consumer purchase intention were integrated. The objective is to explain how hotel livestreaming affects the relationship between online users' viewing and purchase intention to narrow the gap in this research field. The results show that similarities in the personality and values of the viewers and hosts of livestreams facilitate the formation of parasocial interaction, thereby affecting the viewers' emotional engagement and purchase intention. In other words, emotional engagement mediates the relationship between parasocial interaction and consumer purchase intention. Specifically, when the characters or values of hosts align closely with those of viewers, strong parasocial interaction can emerge. This research pioneers the investigation of the antecedents and consequences of viewer–host interactions in livestreaming, and a mediating factor that regulates the effects of parasocial interaction on consumer purchase intention is identified. The findings not only enrich theory on livestreaming but also provide practical recommendations for online sales in the hotel industry.

Nonetheless, the findings of this study have to be seen in light of some limitations. First, the nature of the network economy varies across different time periods and countries. The outbreak of the COVID-19 pandemic has served to enhance the development of China's network economy. Future studies should therefore investigate the network economies of other countries and at different times to verify the applicability of the research model in different contexts. Second, although this study was built on a solid theoretical foundation, a cross-sectional survey was used, in which the data are susceptible to method variance (Min et al., 2016). In the future research, the common method variance can be reduced by collecting data in different times, and setting interference items (Tehseen et al., 2017). Third, given the limited scope of this study, the goals and communication strategies of the hosts of livestreaming programmes were not considered. The above limitations should be considered when interpreting this study's results. Fourth, only quantitative research method is applied. In future, studies should examine the factors that determine how the hosts of livestreaming programmes encourage parasocial interaction with their viewers. Future

research can also comparatively evaluate the potential of livestreaming hosts with different characters and values to encourage parasocial interaction among their viewers. It is also necessary to further investigate the viewer-live streamer interactive relationship through a qualitative or mixed method approaches to enrich the in-depth understanding of such phenomenon in the hotel industry. Finally, the boundary conditions of the relationship between an individual's parasocial interaction and purchase intention should be explored, as these factors may alter the intensity of that individual's parasocial interaction.

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