From information experiences to consumer engagement on brand's social media accounts

Jee-Sun Park[1] and Sejin Ha[2*] ●

*Correspondence:
sha5@utk.edu
[2] Associate professor,
Department of Retail,
Hospitality, and Tourism
Management, University
of Tennessee, Knoxville, TN,
USA
Full list of author information
is available at the end of the
article

Abstract

The purpose of this paper is to propose and empirically validate a model that explains user experiences with information interactions on fashion brand pages, leading to consumer engagement on social media. Specifically, this study tests whether values involved in information interactions prompt positive emotions, which in turn foster experiential states contributing to customer engagement intentions. The moderating role of curiosity is also examined. Data from 290 users of fashion brand page in South Korea were collected using a web-based survey method. Structural equation modeling and the PROCESS macro were used to test the research hypotheses. The results revealed that the perceived values involved in information interactions (usefulness, enjoyment) elicit positive emotions, which foster experiential states (satisfaction, cognitive engagement, elaboration) that lead to engagement intentions with brand pages. The results also showed the moderating effect of curiosity on the relationship between perceived values and positive emotions. Theoretical and practical contributions are discussed.

Keywords: Fashion brand page, Information experience, Information interaction, Engagement intention

Introduction

Social media has made significant changes in the way people interact with and shop for products, becoming an integral part of everyday life. In response, fashion brands have made tremendous efforts to distinguish themselves on social media in order to increase customer engagement. As a result, many brands are witnessing the success of their social media presence. Operating a profile page on social media (aka, a brand page) allows brands to enjoy various benefits with no cost, such as posting advertisements and product-related information, providing real-time communication and customer service, and offering personalized and shoppable content (Ashley & Tuten 2015). Unsurprisingly, engagement with social media continues to grow from the standpoint of both brands and consumers. For example, as of 2019, 98% of fashion brands managed brand pages on Instagram (Hubspot 2019), and 95% of online consumers aged between 18 and 34 and 80% of Instagram users followed a brand page on social media (Hainla 2020). In such a competitive and constantly changing environment, it has become crucial for brands

to develop better brand page strategies not only to attract new customers but also to increase current customer engagement.

Consumer engagement, defined as a consumer's psychological state and participation beyond transactional activities during their iterative and co-creative interaction with an object (such as a brand, product, or brand page) (Brodie et al. 2013; Mollen & Wilson 2010; Van Doorn et al. 2010; Vivek et al. 2012), is a prerequisite for the success of platforms and brands (Verhagen et al. 2015) and therefore has become the key objective that social marketers desire to achieve (eMarketer 2015). Accordingly, consumer engagement for the success of brands' digital platforms, such as social media, has attracted increasing attention from researchers (for example Ferreira et al. 2020) in two primary foci. First, researchers have demonstrated that consumer engagement with a brand page can be multitudinous, encompassing passive interactions (such as consuming the information on the brand page) as well as active interactions (for example providing feedback, posting content, and referring brand posts to their friends) (Barger et al. 2016; Zhou et al. 2013). Second, many studies have identified the drivers predicting consumer engagement, including perceived benefits of using the platform (Kaur et al. 2018; Shi et al. 2016; Verhagen et al. 2015), content characteristics (Ashley & Tuten 2015; De Vries et al. 2012; Gutiérrez-Cillán et al. 2017; Tafesse 2016), marketing efforts (Mishra 2019), community features (Laroche et al. 2012), social media experiences (Triantafillidou & Siomkos 2018; Zhang et al. 2017), and individual consumer characteristics (Islam & Rahman 2016; Mishra 2019). However, how the multi-dimensions of information experiences work as drivers for consumer engagement remains unexplored. That is, there is little research into the process of users' information experiences influencing consumer intentions to engage with the brand page. Moreover, the perspective of value-in-the-experience argues that an individual value is the process of an individual's sense-making process, which is subjective and constitutes experiences within the context of the user's lifeworld (Helkkula et al. 2012). Applying this notion to the brand page context, Carlson et al. (2019) accentuated the role of value in the brand page experience in driving consumer engagement. This experiential perspective (Carlson et al. 2019; Helkkula et al. 2012) provides an alternative view of consumer behavior in a service environment that has shifted the focus from the components provided by the service provider to the experiences that consumers personally have in the environment. Although there have been many studies conducted in the brand page context, most have applied value/benefit frameworks focusing on the users' assessment of characteristics of brand posts (such as quality, time, type, and source of posts) and/or brand pages (such as social presence and marketing efforts) (Kaur et al. 2018; Kim & Johnson 2016; Liu et al. 2019; Seol et al. 2016; Shi et al. 2016; Triantafillidou & Siomkos 2018; Zhang et al. 2017; Zhou et al. 2013). Research investigating what consumers derive from information experiences on brand pages and whether this translates into consumer engagement intentions toward the brand page is needed. Therefore, we aim to fill this void in the literature by developing and testing a model of information experiences on brand pages that contributes to the knowledge of consumers' information experiences and subsequent engagement intentions toward brand pages on social media.

To this end, this study focuses on consumer experiences of information on fashion brand pages, namely information experiences (Bruce et al. 2014). An information

experience is defined as what occurs in the interaction between an individual and the informational lifeworld they encounter (Bruce et al. 2014). Given the widespread use of social media in individuals' lives, social media have created new and dynamic information environments where people actively seek, acquire, create, and share information, extending individuals' information experiences in their lives (Reddy 2014). Thus, understanding how information experiences on brand pages foster strong engagement will help brands develop more engaging and meaningful pages. As different environments involve different sets of information (Bruce et al. 2014; Lupton 2014), understanding the nature and the process of one's information experience specific to a brand page is important. Researchers in this field assert that, going beyond documentary evidence, information encompasses all information-related actions, thoughts, feelings, and life experiences (Bruce et al. 2014; Harlan 2014; Lupton 2014). Thus, one's information experience is subjective and situated and affects one's meaning-making process, which facilitates engagement in the informational environments (Harlan 2014; Lupton 2014). Similarly, brand pages are particularly interactive platforms in which multiple information sources, such as texts, images, videos, hashtags, and links, are supported (Tafesse 2016). In this dynamic environment, consumers' interactions with information are likely to vary as they seek, browse, consume, and share information (Ashley and Tuten 2015; Tafesse 2015), thereby forming unique information experiences. Focusing on information experiences with a brand page, this study claims that this new information channel can facilitate unique information experiences for users, which will develop engagement with the focal brand page (Lupton 2014; Harlan 2014).

To develop a model of information experiences on brand pages, this study builds on the cognitive appraisal theory of emotions (Ellsworth & Scherer 2003; Lazarus & Smith 1988; Roseman & Smith 2001; Smith & Ellsworth 1985), the control–value theory of achievement emotions (Pekrun 2000, 2006; Pekrun et al. 2007) and van der Sluis' (2013) framework of information eXperience (IX). In brief, the proposed model posits that one's information experience consists of perceived values of information interactions, emotions elicited, and experiential states and in turn influences engagement intentions toward brand pages. We further assert that curiosity is another key factor relevant to learning and arousing positive emotions in information experiences (Silvia 2008). As people differ in the extent to which they experience information (Bruce et al. 2014; Harlan 2014; Lupton 2014), personal differences such as curiosity can differentiate the nature of the information interaction process (Heinström 2014). In a brand page setting where consumers interact with available information, one's degree of curiosity plays a moderating role in the effects of the perceived values related to the information interactions on positive emotions. Therefore, this study aims to propose and empirically validate a model of information experiences on brand pages. Specifically, we tested whether values involved in information interactions prompted positive emotions, which in turn would foster experiential states contributing to customer engagement intentions. We also investigated the moderating role of curiosity in the relationship between perceived values and positive emotions.

Literature review

The model of information experience on brand pages

The proposed model of information experience on brand pages is presented in Fig. 1. It explains the process of one's information experiences on a brand page leading to engagement intentions toward the brand page. This model was developed by drawing on the cognitive appraisal theory of emotions (Ellsworth & Scherer 2003; Lazarus & Smith 1988; Roseman & Smith 2001; Smith & Ellsworth 1985) and the control–value theory of achievement emotions (Pekrun 2000, 2006; Pekrun et al. 2007). Cognitive appraisals of emotions are well-developed in psychology, asserting that an individual's appraisal of an event plays a key role in the elicitation and differentiation of emotional experiences (Ellsworth & Scherer 2003; Lazarus & Smith 1988; Roseman & Smith 2001; Smith & Ellsworth 1985). Applying the cognitive appraisal approach to achievement settings, the control–value theory of achievement emotions (Artino et al. 2012; Pekrun 2000, 2006; Pekrun et al. 2007) posits that the appraisals of control and values induce emotions, which then play a role in facilitating cognitive performances and consequent behavioral outcomes (Pekrun 2000, 2006; Pekrun et al. 2007). Both theories emphasize the central role of emotions in one's thinking process and performances and have been empirically supported in various settings (Artino et al. 2012; Butz et al. 2015; Éthier et al. 2006; Goetz et al. 2010; Le et al. 2020; Manthiou et al. 2017; Stark et al. 2018; Zheng et al. 2019).

In an attempt to elucidate one's information experience, van der Sluis (2013) applied these appraisal theories of emotions to the context of information systems, developing a model of Information eXperience (IX). In line with the notion that one's information experience is subjective and intimately related to emotions (Bruce et al. 2014; McCarthy & Wright 2004), the model of IX suggests that one's information experience consists of value appraisals, affective states (positive emotions), and experiential states. Specifically, the model of IX describes that if and, if so, how much instrumental and non-instrumental values information objects offer determine the user's affective states, which consequently affect their experiential states during the experience. Theories of cognitive appraisal of emotion and the control–value theory of achievement emotions corroborate the model of IX although the model has not been empirically tested yet. The former highlight the role of cognitive appraisals in the arousal of emotions and cognitive

Fig. 1 The proposed model
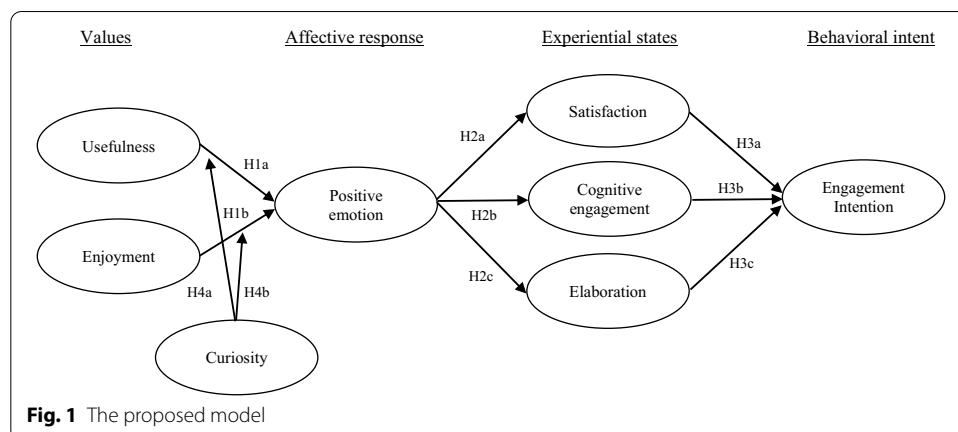
outcomes (Pekrun 2000, 2006; Scherer et al. 2001), and the latter concur that appraisal antecedes emotions, cognitive outcomes, and behaviors in one's information experience (van der Sluis 2013). The theories together support the belief model that perceived values related to cognitive appraisals of an object induce emotions, which then facilitate cognitive processes of the object. Applying the model of information-centric experiences to consumer interactions with information on brand pages enables us to find new insights relevant to consumer behavior in response to fashion brands' social media marketing.

Perceived values

Perceived value, an important concept in studies of consumer behavior (Sánchez-Fernández & Iniesta-Bonillo 2006; Woodruff 1997), refers to an individual's subjective preferential experience that results from an interaction between the individual and an object (Holbrook 1999). Values are considered multifaceted, mainly encompassing two aspects: the extrinsic/utilitarian/instrumental and the intrinsic/hedonic/non-instrumental values (Babin et al. 1994; Chaudhuri & Holbrook 2001; Childers et al. 2001; Jones et al. 2006; Overby & Lee 2006). Extrinsic/utilitarian/instrumental values concern practical and functional aspects of interactive objects and/or interactive processes. They are associated with the extent to which an interactive object is useful (Babin et al. 1994; Chang & Tseng 2013; Lin & Lu 2011) based on its rational and cognitive aspects (Batra and Ahtola 1991; Zeithaml 1988). Contrary to utilitarian values, intrinsic/hedonic/non-instrumental values are related to hedonically rewarding experiences during the interaction with an object. They are derived from the subjective assessment of experiential benefits, such as having fun and enjoyable experiences (Babin et al. 1994; Chaudhuri & Holbrook 2001; Childers et al. 2001; Jones et al. 2006; Overby & Lee 2006). Given that users take into account information of instrumental as well as non-instrumental relevance (Hassenzahl & Tractinsky 2006; van der Sluis 2013), this study captures the extrinsic/utilitarian/instrumental and intrinsic/hedonic/non-instrumental values of a user's information interaction on a brand page by means of perceived usefulness and perceived enjoyment, respectively. Previous research has confirmed that users' perceived usefulness and perceived enjoyment are key motivators for people to consume and use social media (Lin & Lu 2011; Seol et al. 2016; Sullivan & Koh 2019).

Perceived usefulness is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis 1989, p. 320). Mainly determined based on rational and cognitive assessments of an object (Batra & Ahtola 1991; Zeithaml 1988), perceived usefulness is essential to information experiences in that if the information system does not provide users with useful information, there is no need for users to interact with the system (Hassenzahl & Tractinsky 2006; van der Sluis 2013). The usefulness that the information interaction brings to the user (Babin et al. 1994; Chang & Tseng 2013; Lin & Lu 2011) relates to practical and functional aspects of information experiences on brand pages. In this study, perceived usefulness refers to the extent to which a user perceives their interactions with information on a brand page to be relevant and helpful.

Perceived enjoyment is defined as "the extent to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated" (Davis et al. 1992, p. 1113). The non-instrumental

and hedonic value is critical in users' experiences with interactive products and human–computer interactions (HCIs) (Hassenzahl & Tractinsky 2006) because the value can satisfy basic human needs (Hassenzahl 2004; van der Sluis 2013). Consumer behavior research has proven that perceived enjoyment is hedonically rewarding experiences with information (Babin et al. 1994; Chaudhuri & Holbrook 2001; Childers et al. 2001; Jones et al. 2006; Overby & Lee 2006). This study defines perceived enjoyment as the degree to which a user perceives their information interactions with a brand page to be fun and entertaining.

Affective responses: positive emotions

Emotions are defined as "mental states of readiness that arise from appraisals of events of one's own thoughts" (Bagozzi et al. 1999, p. 184). This study focuses on positive emotions to examine affective responses to a user's information experience. The literature indicates that positive emotion arises when an evaluation of an action is consistent with attaining one's goals (Bagozzi et al. 1999). Cognitive appraisal theories of emotions assert that one's cognitive appraisals of an activity play a key role in eliciting and differentiating between emotional experiences (Ellsworth and Scherer 2003; Lazarus and Smith 1988; Roseman and Smith 2001; Smith & Ellsworth 1985). In a similar vein, the control–value theory of achievement emotions (Pekrun 2000, 2006; Pekrun et al. 2007) supports the impact of one's appraisals of values on the arousal of emotions in the context of learning (Butz et al. 2015; Goetz et al. 2010; Stark et al. 2018). The model of IX also suggests that when an activity or an information interaction is perceived to be relevant, values, such as usefulness and enjoyment, induce positive emotions (van der Sluis 2013). In a brand page environment, for example, when consumers look for new product information and find the right product accompanied by a 10% discount on the brand page, this instance would provoke positive emotions. Therefore, it is expected that as a consumer perceives greater value in terms of usefulness and enjoyment during their interactions with information on brand pages, more pleasant emotions will arise.

Hypothesis 1 Perceived values involved in information interactions (a: usefulness, b: enjoyment) on a brand page positively influence positive emotions.

Experiential states: satisfaction, cognitive engagement, and elaboration

Positive emotions that arise by values perceived during the information interaction further encourage favorable mental states (Artino et al. 2012; Pekrun 2000, 2006; Pekrun et al. 2007; van der Sluis 2013). Among numerous mental states that can arise during information interactions (such as motivational, cognitive, and regulatory processes), positive emotions particularly stimulate intrinsic motivation leading to self-satisfaction, cognitive resources increasing cognitive engagement, and meta-cognitive and elaborating strategies (Pekrun 2000, 2006; Pekrun et al. 2007). Similarly, van der Sluis (2013) conceptualizes three prototypical experiences pertinent to information experiences: positive, cognitively engaging, and elaborative experiences. First, a satisfying and positive experience is key to the overall success of interaction systems (Hassenzahl 2011). As the primary construct of positive experiences in a certain situation, satisfaction is a

targeted and integrated experience of information interactions (Heinström 2014; van der Sluis 2013). Second, a cognitively engaging experience refers to a highly concentrated and absorbed mental state while undertaking an activity (Lin et al. 2008). Third, an elaboration experience, involving a user's effortful, thoughtful, and conscious processing of information (Petty & Wegener 1999), is different from the other two in that this experiential state reflects the meta-cognitive processing of the experience (Artino et al. 2012; Pekrun 2000, 2006; Pekrun et al. 2007; van der Sluis 2013). In sum, this study focuses on satisfaction, cognitive engagement, and elaboration to examine one's experiential states during an information interaction on a brand page.

Satisfaction

Consumers tend to be satisfied when the outcomes of their consumption behaviors meet or exceed their expectations (Westbrook & Oliver 1991). Satisfaction, although related to emotions (Mano & Oliver 1993; Westbrook & Oliver 1991), is distinct in that satisfaction is dependent on the (dis)confirmation between one's expectations and the performance of an object (Oliver 1993). A rich body of research has shown that positive emotions evoked by consumption experiences influence satisfaction (Mano & Oliver 1993; Oliver 1993; Westbrook & Oliver 1991). In a brand page environment, positive emotions stemming from information interactions will foster satisfaction with the overall interaction experience.

Cognitive engagement

To be cognitively engaged means "to be involved, occupied, and interested in something" (Higgins 2006, p. 442). Cognitive engagement enhances learning, exploratory behavior, and task performance (Hoffman & Novak 1996,2009; Lin et al. 2008; van der Sluis 2013) and allows users to be absorbed and engrossed in an activity (Agarwal & Karahanna 2000; Higgins 2006). Positive emotions evoked by cognitive appraisals facilitate cognitive and motivational processes and learning (Pekrun 2000, 2006; Pekrun et al. 2007). Prior studies have supported the pervasive role of positive emotions in enhancing cognitive engagement in learning environments (Ainley & Ainley 2011; Linnenbrink-Garcia & Pekrun 2011). When users feel happy during information interactions, such feelings increase their willingness to put more effort into the interaction to further scrutinize the information.

Elaboration

Elaboration, defined as a "process of relating semantic information from the target event to other aspects of the individual's knowledge" (Hunt & Einstein 1981, p. 497), is an important predictor of self-regulated learning experiences (Artino & Jones 2012). Elaboration occurs when individuals focus on the information, categorize attributes of the information, and make associations with other pieces of information in their minds. Emotions, whether they are positive or negative, influence one's motivation, elaboration, and critical thinking (Pekrun et al. 2002). Positive feelings allow individuals to think creatively and be flexible and open-minded, stimulating more global processing (Sar 2013) as they enable people to activate working memory (Perlstein et al. 2002), develop creative problem-solving (Ashby & Isen 1999),

and integrate different resources to organize their thoughts (Isen 2000). Thus, how one feels during an information interaction will affect elaboration. In the context of information interactions on brand pages, individuals not only scrutinize details of information on a brand page but also compare the information with their own personal experiences. Based on the literature, it is expected that positive emotions will positively facilitate elaboration.

Hypothesis 2 Positive emotions enhance experiential states (a: satisfaction, b: cognitive engagement, c: elaboration) on a brand page.

Brand page engagement intentions

Consumer engagement intentions are widely examined as a proxy for the success of the brand's marketing strategies, such as a brand page on social media (Verhagen et al. 2015). Brand page engagement intentions are defined as the likelihood of continued consumer interactions with brand pages on social media (Verhagen et al. 2015). Engagement has been proven to manifest various forms of positive behaviors beyond transactions, such as customer loyalty, word-of-mouth, co-creation, sharing opinions and content, and assisting other consumers (Brodie et al. 2013; Kuo & Feng 2013; Wirtz et al. 2013; Zhang et al. 2017). Particularly, studies have verified the significant role of consumer engagement in the success of technology-mediated environments (Brodie et al. 2013; O'Brien & Toms 2008; Verhagen et al. 2015) where engagement drives favorable behavioral intentions toward the brand, such as word-of-mouth, purchase intention, brand loyalty, and brand equity (Liu et al. 2019; Mishra 2019; Zhang et al. 2017). Thus, fostering consumer engagement with a brand page is critical to the success of the brand's social networking sites and the brand as a whole.

A variety of information sources in social media, such as brand postings and other consumers' comments, contribute to perceptions of information value (Carlson et al. 2019; Kaur et al. 2018; Kim & Johnson 2016; Shi et al. 2016; Zhang et al. 2017; Zhou et al. 2013). Consumer experiences of high-quality information that help consumers stay up-to-date with a brand and its products, learn new things, and solve their own problems is one of the major motivators for using and continuing to use a brand's social media (Kaur et al. 2018; Kuo & Feng 2013; Shi et al. 2016; Triantafillidou & Siomkos 2018; Zhang et al. 2017; Zhou et al. 2013). Thus, pleasant and engaging experiences with information on brand pages enhance consumers' willingness to engage with the brand pages (Tafesse 2016). Even momentary positive experiences with a brand page promote engagement intentions (Brodie et al. 2013; Mollen & Wilson 2010). Based on the literature, it is reasonable to expect that consumers' experiential states aroused during the information interaction on brand pages will affect engagement intentions toward the brand pages.

Hypothesis 3 Experiential states (a: satisfaction, b: cognitive engagement, c: elaboration) positively influence engagement intentions.

Curiosity as a moderator

The degree to which an individual feels curious plays a role in their information processing and emotional responses toward stimulation (Koo & Ju 2010). Curiosity reflects an "appetitive state involving the recognition, pursuit, and intense desire to investigate novel information and experiences that demand one's attention" (Garrosa et al. 2017, p. 21). The power of curiosity in driving information processing and consumer behavior in digital environments is well established (Menon & Soman 2002; Urista et al. 2009; Thomas & Vinuales 2017). Curiosity is especially relevant in social media (Fang et al. 2018; Thomas & Vinuales 2017) because information-seeking and exploring contents from brands and others are a key driver for accessing brand pages on social media.

Curiosity affects consumer behavior by prompting a desire for information, even in the absence of external reward (Loewenstein 1994), attention (Huang 2006), and exploration (Heinström 2014), thereby enhancing engagement with and the performance of tasks (Kidd & Hayden 2015; Loewenstein 1994). Moreover, curious people tend to sense an information gap and try to mitigate the discrepancy and/or uncertainty this gap causes by seeking additional information (Loewenstein 1994). That is, curiosity engenders information-seeking and goal pursuit. Likewise, curiosity interacts with positive and pleasant feelings and energy (Kashdan et al. 2004) so that this source of intrinsic motivation magnifies positive feelings of interest and arousal while making individuals better able to cope with emotional distress (Silvia 2019). As such, the degree of an individual's curiosity is likely to have an impact on their experiences with information on a brand page. Curiosity in this study refers to the extent to which one perceives themselves to be inquisitive when they interact with information on brand pages.

Curious individuals tend to be highly involved in their current situations (Huang 2006) and feel positive toward stimulation (Koo & Ju 2010). Perceptions of curiosity from interacting with new information of personal interest (e.g., new fashion trends or co-creation opportunities) can function as an intrinsic reward and thus heighten feelings of pleasure and satisfaction (Garrosa et al. 2017; Kashdan et al. 2004; Loewenstein 1994). These intrinsically rewarded efforts facilitate pleasant feelings when the activity itself is interesting, enjoyable, and useful to the consumers, since the process provokes their curiosity (Heinström 2014; Loewenstein 1994; Silvia 2019). Accordingly, it is expected that perceived curiosity moderates the effects of perceived values on positive emotions aroused during information interactions on brand pages.

Hypothesis 4 Perceived curiosity moderates the relationship between the perceived values of information interactions and positive emotions experienced on a brand page. That is, compared to low curiosity, high curiosity strengthens the positive effects of perceived values on positive emotions (a: usefulness, b: enjoyment).

Method

Data collection

To collect the data, this study used a web-based survey with adult consumers in South Korea who followed more than one fashion brand's social networking site (SNS). The

survey was administered by a professional panel provider in South Korea, and 290 usable responses were collected for analysis. Upon arrival at the survey site, participants read a brief introduction regarding the study and the definition of SNS. Then, they were asked to name the SNS brand page they had most recently visited and to consider this SNS page when answering the questionnaire.

Measures

The survey contained multi-item questions designed to measure key research variables (see Table 2). All variables, except for usefulness, positive emotions, and demographic information, were assessed using a seven-point Likert scale (one = *strongly disagree*; seven = *strongly agree*). Usefulness and positive emotions were also measured on a seven-point scale with semantic differential items. All measures were adopted from previous studies, which demonstrated evidence of reliability and construct validity. A total of seven items were used to capture perceived values involved in information interactions—four items for usefulness (Frank et al. 2014; Voss et al. 2003) and three items for enjoyment (Lin & Lu 2011). Positive emotions were measured using a four-item scale from Nambisan and Baron (2007). Experiential states were measured in terms of satisfaction, cognitive engagement, and elaboration. Two items from Song and Zinkhan (2008) were used to gauge satisfaction; three items from Lin et al. (2008) assessed cognitive engagement; and a five-item elaboration scale from Oh and Sundar (2015) and Kahlor et al. (2003) was used to measure elaboration. Consumer engagement intentions and curiosity were assessed using five items adopted from Verhagen et al. (2015) and two items from Huang (2006), respectively.

Results

Sample characteristics

The demographic characteristics of respondents are summarized in Table 1. The mean age of the respondents was 28 years old, ranging from 20 to 49, and 69.0% were female. The respondents were fairly well-educated, with 56.6% indicating that they had completed a university degree or above. As for SNS usage, respondents listed Facebook (79%), Instagram (77.2%), Kakao Story (39%), Twitter (27.9%), and Pinterest (6.2%) as their favorite SNSs. The average time per day respondents spent on SNSs was approximately 35 min.

Data analyses

Hypotheses one to three were tested using a two-stage structure equation modeling approach (Anderson & Gerbing 1988). First, confirmatory factor analysis (CFA) was performed in order to ensure the quality of the proposed measurement model. Second, structural equation modeling was conducted to test the proposed hypotheses. Both analyses were performed with Amos 25.0 with maximum likelihood estimation of the covariance matrix. To test Hypotheses 4a and 4b, data analyses were conducted using the PROCESS macro from SPSS (Hayes 2013).

Table 1 Demographic characteristics

Characteristic	n	%
Gender		
Male	90	31.0
Female	200	69.0
Age		
20–25	138	47.6
26–30	61	21.0
31–35	53	18.3
36–40	21	7.2
41–49	17	5.9
Education		
High school graduate	17	5.9
Bachelor's and college student	109	37.6
Bachelor's degree	147	50.7
Master's degree or above	17	5.9
Occupation		
Self-employed	4	1.4
Sales and service work	12	4.1
Manufacturing work	3	1.0
Office work	109	37.6
Business administration and management	5	1.7
Professional	18	6.2
Student	113	39.0
House work	9	3.1
Others	17	5.9
Household monthly income (Korean Won)		
Less than 1,000,000	60	20.7
1,000,000–less than 2,000,000	62	21.4
2,000,000–less than 3,000,000	56	19.3
3,000,000–less than 4,000,000	37	12.8
4,000,000–less than 5,000,000	22	7.6
5,000,000–less than 6,000,000	16	5.5
More than 6,000,000	37	12.7

Measurement model

CFA was performed to establish the fit of the measurement model for structural analysis. The CFA results exhibited an acceptable fit ($\chi^2 = 495.19$, $df = 317$, $\chi^2/df = 1.56$, $p < 0.001$, CFI $= 0.97$, TLI $= 0.94$, IFI $= 0.97$, RMSEA $= 0.04$, SRMR $= 0.04$). All the coefficients were significant (C.R. > 12.16). Table 2 provides the items used in the model, standardized factor loadings, Cronbach's alpha coefficients, and the construct reliabilities. As shown in Table 3, the AVEs of all the constructs were greater than the threshold value of 0.5, so the convergent validities of all constructs were established (Fornell & Larcker 1981). In addition, the AVE of each construct was greater than the shared variances (squared correlation coefficients) between all possible pairs of constructs, providing evidence for discriminant validity. Consequently, the analyses confirmed the construct validity of all the latent constructs.

Table 2 Measurement model assessment results

Variables	Factor loading	Cronbach's α	Construct reliability
Usefulness (Interacting with information, such as postings, in this brand page was…)			
Ineffective–effective	0.85	0.90	0.90
Unhelpful–helpful	0.88		
Impractical–practical	0.75		
Useless–useful	0.83		
Enjoyment (While I was interacting with information, such as postings and comments, in this brand page…)			
I had fun	0.79	0.88	0.88
It provided me with a lot of enjoyment	0.89		
I enjoyed the process of the information interaction	0.86		
Positive emotion (My feelings during the interaction with information in this brand page was close to…)			
Bad–good	0.75	0.86	0.86
Sad–happy	0.81		
Positive–negative (reversed)	0.71		
Unpleasant–pleasant	0.84		
Satisfaction (While I was interacting with information, such as postings and comments, in this brand page…)			
The overall experience with this brand page was delighted	0.75	0.79	0.79
Overall, I am very satisfied with this brand page	0.86		
Cognitive engagement (While I was interacting with information, such as postings and comments, in this brand page…)			
I was deeply engrossed	0.78	0.89	0.89
I concentrated fully on what I was doing	0.89		
I was totally absorbed in what I was doing	0.88		
Elaboration (While I was interacting with information, such as postings and comments, in this brand page…)			
I thought about what actions I myself might take based on some posts on this brand page	0.72	0.87	0.87
I found myself making connections between the contents (posts) and what I've read or heard about elsewhere	0.75		
I thought about how what I had read/saw on this brand page related to other things I know	0.67		
I tried to think of the practical applications of what I read/saw from the posts in the brand page	0.78		
I tried to relate the ideas in the stories (of the posts) to my own life	0.84		
Engagement intention			
I intend to stay on as a friend/follower (customer member) in this SNS site	0.75	0.91	0.90
I will recommend this SNS site to others	0.83		
If friends or relatives who has the same interest ask for advice, I would recommend this SNS site	0.84		
I want to help other customers/members/friends in this SNS with their questions	0.79		
I want to help the brand to improve its service	0.76		
Curiosity			
Interacting with the information interaction excited my curiosity	0.75	0.83	0.82
Interacting with the information made me curious	0.82		

Stem question in parentheses

Table 3 Convergent and discriminant validity

	1	2	3	4	5	6	7	8
1. Usefulness	0.69							
2. Enjoyment	0.42	0.72						
3. Positive emotion	0.49	0.40	0.61					
4. Satisfaction	0.55	0.52	0.14	0.65				
5. Cognitive Engagement	0.27	0.37	0.31	0.29	0.72			
6. Elaboration	0.28	0.35	0.14	0.27	0.31	0.57		
7. Engagement intention	0.38	0.38	0.24	0.59	0.41	0.32	0.63	
8. Curiosity	0.44	0.67	0.36	0.45	0.28	0.44	0.24	0.70

Diagonal entries are AVE for each construct. Off-diagonal entries are the squared correlation coefficients between constructs

Fig. 2 Resulted model. Numbers are standardized regression weights. ** $p < 0.01$, *** $p < 0.001$
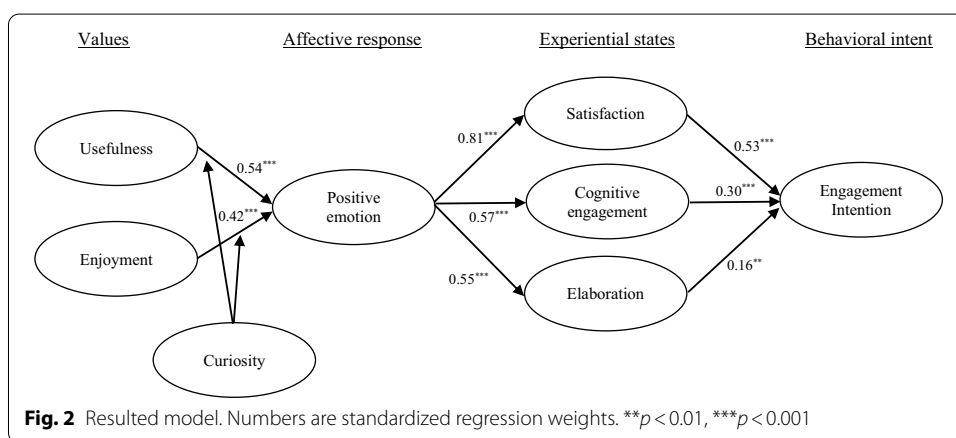
Hypotheses testing

Structural equation modeling was performed to test hypotheses one to three. The results exhibited an adequate model fit ($\chi^2 = 585.80$, $df = 285$, $\chi^2/df = 2.06$, CFI $= 0.94$, TLI $= 0.93$, IFI $= 0.94$, RMSEA $= 0.06$, SRMR $= 0.07$). The model accounted for 76.8%, 66.2%, 32.6%, 30.6%, and 64.8% of the variances in positive emotions, satisfaction, cognitive engagement, elaboration, and consumer engagement intentions, respectively (see Fig. 2). Hypotheses 1a and 1b predicted the impact of the instrumental and non-instrumental values of information interactions—usefulness and enjoyment—on positive emotions. Positive emotions were significantly influenced by usefulness ($\beta = 0.54$, $t = 8.12$, $p < 0.001$) and enjoyment ($\beta = 0.42$, $t = 6.65$, $p < 0.001$). Therefore, Hypothesis 1a and 1b were supported. Furthermore, in order to see the relative strength of the two values, the bootstrap method (using 1000 re-samples) was employed. The substantial overlap of over 50% of 95% bias-corrected confidence intervals (CIs) suggests that the beta weights of the two were not statistically different (Cumming 2009). The results inferred that both usefulness and enjoyment perceived from information environments were equally important in arousing positive emotions in one's information experiences in the context of fashion brand pages, supporting the current perspective on user experiences in the disciplines of information systems and HCIs (Hassenzahl 2004; Hassenzahl & Tractinsky 2006; van der Sluis 2013). Hypotheses

2a–2c explicated the associations between positive emotions and the three dimensions of experiential states, including satisfaction, cognitive engagement, and elaboration. Results showed that positive emotions had a significantly positive impact on satisfaction ($\beta = 0.81$, $t = 11.96$, $p < 0.001$), cognitive engagement ($\beta = 0.57$, $t = 8.58$, $p < 0.001$), and elaboration ($\beta = 0.55$, $t = 8.18$, $p < 0.001$), in support of Hypotheses 2a, 2b, and 2c. Hypotheses 3a–3c postulated the associations between experiential states and consumer engagement intentions toward brand SNS pages. The results revealed that engagement intentions were significantly influenced by satisfaction ($\beta = 0.53$, $t = 7.68$, $p < 0.001$), cognitive engagement ($\beta = 0.30$, $t = 5.20$, $p < 0.001$), and elaboration ($\beta = 0.16$, t-value $= 2.95$, $p < 0.01$), yielding support for Hypotheses 3a, 3b, and 3c. Through bootstrapping (1000 re-samples), we examined the extent of overlaps of CIs for the beta estimates for the effects of the three experiential states (satisfaction, cognitive engagement, and elaboration) on consumer engagement intentions. The results revealed that the overlaps for all pairs were less than 50%, indicating that the strength of the effects of experiential states on engagement intentions differed significantly from each other (Cumming 2009). Specifically, satisfaction was found to have a greater impact on engagement intentions ($\beta = 0.53$), followed by cognitive engagement ($\beta = 0.30$) and elaboration ($\beta = 0.16$).

The PROCESS macro from SPSS (model 1, 5000 bootstrap samples) (Hayes 2013) was used to test Hypotheses 4a and 4b regarding the possibility that curiosity moderates the relationships between perceived values (usefulness, enjoyment) and positive emotions. We first tested whether or not curiosity moderated the effect of perceived usefulness on positive emotions. The results revealed that the overall model was significant: $F(3286) = 69.47$, $p < 0.001$, $R^2 = 0.422$. The significant interaction between usefulness and curiosity ($b = 0.11$, SE $= 0.03$, $t = 3.32$, $p < 0.01$) suggested that as curiosity increases, the relationship between perceived usefulness and positive emotions becomes stronger. The second procedure to determine the moderating effect of curiosity on the relationship between enjoyment and positive emotions also indicated that the overall model ($F(3286) = 53.09$, $p < 0.001$, $R^2 = 0.422$) and the interaction between enjoyment and curiosity ($b = 0.12$, SE $= 0.03$, $t = 4.25$, $p < 0.01$) were significant. Therefore, the relationship between perceived enjoyment and positive emotions becomes stronger with increasing degrees of curiosity. The results of the moderation analyses are highlighted in Table 4. As expected, the influence of positive emotions related to one's instrumental and non-instrumental values involved in information interactions becomes stronger for highly curious consumers, supporting Hypotheses 4a and 4b.

Table 4 Moderation effect of curiosity

Predictor	Curiosity	Effect	SE	t	CI$_{95\%}$
Perceived usefulness	3.99 (Mean − 1*SD*)	0.43	0.07	6.57	0.30, 0.56
	5.04 (Mean)	0.54	0.06	8.92	0.42, 0.66
	6.08 (Mean + 1*SD*)	0.65	0.07	8.98	0.51, 0.79
Perceived enjoyment	3.99 (Mean − 1*SD*)	0.23	0.07	3.15	0.08, 0.37
	5.04 (Mean)	0.36	0.07	5.44	0.23, 0.48
	6.08 (Mean + 1*SD*)	0.48	0.07	6.74	0.34, 0.62

Discussion

The purpose of this research was to understand user experiences with information interactions on brands' social media pages. In line with theories of cognitive appraisals of emotion in psychology and education (Ellsworth & Scherer 2003; Pekrun 2000, 2006; Pekrun et al. 2007; Scherer et al. 2001) and the model of IX (van der Sluis 2013) conceptually developed in information systems, this study conceptualized a model of information experiences on brand pages and validated the model within the context of fashion brands' social media pages. Specifically, consumers consider a brand's social media page to function as a source of information in which values (usefulness, enjoyment) experienced during information interactions elicit positive emotions, which foster experiential states (satisfaction, cognitive engagement, and elaboration). This study further showed that the effect of values on positive emotions is moderated by curiosity. Based on these results, we argue that a user's engagement toward a fashion brand page can be enhanced when the user has strong and positive information experiences on the brand's page.

This paper contributes to the literature on consumer engagement, information experiences, and appraisals of emotions in several ways. First, the study adds value to the expanding discourse on consumer engagement in the context of social media brand pages. By examining the effects of individuals' information experiences on their consumer engagement intentions with brand pages, the study posits that an individual's information experiences offer an important viewpoint to understand consumer engagement with a service environment, such as brand pages on social media. Carlson et al. (2019) addressed values experienced during individuals' interactions with brand pages as drivers of consumer engagement. This study extends their findings by showing that consumer engagement can develop through their information experiences during their interactions with brand pages. In a similar vein, in a netnography study, Brodie et al. (2013) asserted that the need for information is a basic customer need in an online brand community environment and developed a model of customer engagement in which learning is a key sub-process of consumer engagement. Their model is corroborated by our quantitative investigation with consumer surveys that underscores the significance of taking users' information experiences into account regarding customer engagement in interactive and experiential environments, such as brand pages.

Second, to answer our questions, *what are information experiences on brand pages*, *how is information experienced*, and *why is it important in this context*, we developed a model by coordinating theoretical frameworks from different disciplines, including psychology, education, and information systems. The cross-disciplinary approach helped us propose a model of consumer engagement in fashion brand social media pages that centers around the view of information experiences (Bruce et al. 2014). Specifically, the study demonstrated that information experiences comprise three components—instrumental and non-instrumental values, affective responses, and experiential states—in agreement with the concepts of user experience (Hassenzahl 2004; Hassenzahl & Tractinsky 2006) and information experience (van der Sluis 2013). Additionally, the causal relationships among these components are in line with the appraisal perspectives of emotions (Ellsworth & Scherer 2003; Pekrun 2000, 2006; Pekrun et al. 2007; Scherer & Moors 2019). Together, this study offers a preliminary insight into what occurs in the intersection between consumers and an online information world managed by fashion

brands, opening up new studies on consumer information experiences and engagement in relation to digital fashion marketing.

More specifically, as for antecedents to positive emotions, both instrumental (usefulness) and non-instrumental (enjoyment) values resulting from users' information experiences strongly influence the arousal of positive emotions, consistent with the notions of values in consumer research (Babin et al. 1994; Chaudhuri & Holbrook 2001; Childers et al. 2001; Jones et al. 2006; Overby & Lee 2006) and information systems and HCIs (Hassenzahl 2004; Hassenzahl & Tractinsky 2006; van der Sluis 2013). Among many types of values, values from information experiences on a brand page are of particular interest to this study (Bruce et al. 2014; Carlson et al. 2019; Helkkula et al. 2012). When consumers find browsing, reading, and/or sharing information useful and enjoyable, they are likely to have positive emotions, such as happiness, pleasure, and the feeling of fun. On a brand's social media page, many tangible sources (for example images, verbal content, videos, hashtags, and links by the brand), internal information (such as their feelings, thoughts, and personal experiences), and external information (such as others in the place) can be informative to users (Lupton 2014). They represent instrumental as well as non-instrumental values and contribute to positive emotions.

Regarding outcomes of positive emotions, this study delineates three prototypical experiential states occurring from information experience on brand pages: satisfaction, cognitive engagement, and elaboration experiences. While the findings indicate that consumers are more willing to engage with brand pages when they are satisfied, cognitively engaged, and elaborating on the information in the process of information interactions on brand pages, the relative magnitude of effects they had on engagement intention was different. That is, among the three experiential states, satisfaction had the strongest impact on engagement intentions, confirming the direct and strong relationships between satisfaction and loyalty discussed in numerous studies (Kumar et al. 2013). Since satisfaction is associated with the overall evaluation about the quality of experiences, while cognitive engagement and elaboration rather specify individuals' process of cognitive performances, satisfaction is deemed to be the most powerful determinant of consumer behavioral intentions, such as engagement intentions. The dynamics of the experiential states merits future research to deepen our understanding of this phenomenon.

Third, the results from this study support the appraisal theories of emotions from psychology and education (Ellsworth & Scherer 2003; Pekrun 2000, 2006; Pekrun et al. 2007; Scherer & Moors 2019) by demonstrating the central role of emotions in processing information experiences. Our findings indicate that one's appraisals deriving from an activity are central to the arousal of emotions, which further facilitate the cognitive outcomes of the activity. In this study, values from information interactions are subjectively appraised by consumers based on what they want to achieve through the interaction, which then influences their emotions. Aligning with the literature about information experiences, which explains that the emotional valence of information experience is another information source that motivates a user to continue interacting with information for decision making (Heinström 2014), this study highlights the significance of understanding emotions to explain information experiences and consumer behavior in the context of social media brand pages.

Fourth, we found that the effect of values on positive emotions is contingent on the level of curiosity an individual experiences while interacting on a brand page. The influence perceived values—both instrumental and non-instrumental—have on inducing positive emotions is stronger for consumers experiencing higher levels of curiosity than others. In line with studies asserting that individuals with a high level of curiosity are more likely to seek and respond to information that is personally meaningful (Garrosa et al. 2017; Kashdan et al. 2004; Loewenstein 1994) and that curiosity is positively associated with emotions of interest (Silvia 2008), this study's findings offer evidence that how much of curiosity users experience on a brand's social media page affects the cognitive appraisal–emotions process.

Insights derived from this study also have implications for fashion brands' social media marketing. Despite anecdotal evidence that understanding information experiences in this service environment is a priority (Reddy 2014), there had been little research. The current study proves that successful information experiences enhance consumer engagement intentions toward a brand page. Consumer engagement on the brand page is the key to loyalty, satisfaction, empowerment, connection, emotional bonding, trust, and commitment (Brodie et al. 2013; O'Brien & Toms 2008; Verhagen et al. 2015), and in this regard, managerial efforts should be made to understand the target customer, how they interact with information, and what information sources they check on the brand page. Characterization of information experiences explored from the users' perspective will enable fashion brand managers and social media marketers to develop more relevant strategies.

This study can also help businesses design brand pages on social media. The findings highlight the role of positive emotions in consumers' interactions with brand pages. Positive emotions are facilitated when consumers perceive their information interactions to be useful and enjoyable. Thus, it becomes important for brand marketers to design their brand pages using posts that are informative, pleasant, and entertaining. In addition to informative sources, such as information about new products, promotions, and sales, other sources for fun and entertaining visits, such as videos, co-creation opportunities, and live streaming events, make customers' visits to the brand page useful, enjoyable, and meaningful. Thus, surveying users' sources of information experiences will allow marketers to analyze what is relevant and perceived to be informative and entertaining yielding positive emotions.

Lastly, the findings on the significant moderating effect of curiosity on the relationship between perceived values and positive emotions suggests that marketers should concentrate on strategies to stimulate users' curiosity when they visit brand pages. For example, designing posts with novel and interesting fashion trends may induce users' curiosity. Marketers may also focus their attention on attracting users with high levels of curiosity to their brand pages.

This study has several limitations. First, this study used a convenience sample collected in South Korea, which may limit the generalization of the findings to other demographics in other countries. Second, the experiential states of information experience presented in this study are based on van der Sluis' (2013) conceptual model of IX that has not been empirically validated yet. Since the IX was originally made for information systems, there may be other states of information experiences relevant to fashion brand

pages beyond the scope of the present investigation. Therefore, we encourage researchers to explore dimensions of experiential states of information experiences specific to consumer information interactions on fashion brand pages.

Third, our data used self-reported measures relying on respondents' retrospective perceptions of their interactions with information on brand pages that they had selected. Retrospective perceptions may not represent the actual experiences of the moment. Therefore, future research employing techniques that allow the assessment of momentary experiences would be beneficial. For example, considering the nature of subjectivity and context-dependency of information experiences, a phenomenological approach that explores individuals' lived information experiences reflecting their own lifeworld contexts would enable a deeper understanding of the phenomenon. Similarly, using survey methods limits one's information sources that may possibly be available in real situations, where individuals are able to interact with and are influenced by different actors near them or on the internet. Thus, future research needs to explore whether and how the different sources of information provided by different actors (brands, other consumers) shapes users' information experiences, and whether and how information experiences can be molded in the presence of users' perceptions.

Finally, while the present study considered curiosity as a moderator that had an impact on the affective responses toward the information interactions, other moderators may also explain user experiences with information interactions. Especially since people experience information differently, future research exploring individual differences (e.g., need for cognition, need for interaction, and processing style) will enrich the understanding of dynamic information experiences.

Authors' contributions
Both authors developed the research idea. JSP collected and analyzed data and drafted the manuscript. SH guided the development of and reviewed the manuscript. Both authors read and approved the final manuscript.

Availability of data and materials
Access to the datasets is restricted unless additional approval of IRBs is obtained.

Competing interests
The authors declare that they have no competing interests.

Author details
[1] Associate professor, Department of Fashion Industry, Incheon National University, Incheon, South Korea. [2] Associate professor, Department of Retail, Hospitality, and Tourism Management, University of Tennessee, Knoxville, TN, USA.

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