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# Customer engagement behaviours in social media: capturing innovation opportunities

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## Abstract

**Purpose** – Social media brand pages have become instrumental in enabling customers to voluntarily participate in providing feedback/ideas for improvement and collaboration with others that contribute to the innovation effort of brands. However, research on mechanisms which harness these specific customer engagement behaviours (CEB) in branded social media platforms is limited. Based on the stimulus–organism–response paradigm, this study investigates how specific online-service design characteristics in social media brand pages induce customer-perceived value perceptions, which in turn, stimulate feedback and collaboration intentions with customers.

**Design/methodology/approach** – Data collected from 654 US consumers of brand pages on Facebook were used to empirically test the proposed framework via structural equation modelling.

**Findings** – The theoretical framework found support for most hypothesized relationships showing how online-service design characteristics induce an identified set of customer value perceptions that influence customer feedback and collaboration intentions.

**Research limitations/implications** – The sample is restricted to customer evaluations of brand pages on Facebook in the USA. Practitioners are advised to maximize online-service design characteristics of content quality, brand page interactivity, sociability and customer contact quality as stimulants that induce brand learning value, entitativity value and hedonic value. This then translates to customer feedback and collaboration intentions towards the brand page.

**Originality/value** – The findings have important implications for the design and optimization of online services in the customer engagement–innovation interface to harness CEBs for innovation performance.

**Keywords** Customer value, Social media, Online services, Customer participation, Customer engagement behaviour

**Paper type** Research paper

## Introduction

Brands globally are making substantial investments in social media brand communities to better engage with their customers to identify and facilitate co-created innovation opportunities (Kao *et al.*, 2016; Hamilton *et al.*, 2016; Uncles and Ngo, 2017). Studies across service environments indicate that an engaged customer actively participates in idea generation and collaborative behaviours such as sharing knowledge, ideas and preference information to support the brand (Alexander and Jaakkola, 2016; Gruner *et al.*, 2014). Central to the successful management of such interactions is an understanding of what stimulates customer engagement behaviours (hereafter CEB) in a social media environment,

which contributes to the innovation efforts of brands, and ultimately, enhanced value propositions to target audiences.

Advancements in online services have enabled interactive “engagement platforms” to be constructed where consumers can exchange resources as well as co-create value (Ramaswamy, 2009; Breidbach *et al.*, 2014). In this context, scholars have argued that the concept of CEB has brought about a new behavioural perspective. This perspective examines customers’ behavioural manifestations that have a brand focus, beyond purchase, resulting from motivational drivers that add value to the firm (Van Doorn *et al.*, 2010; Groeger *et al.*, 2016). Therefore, managers need to increasingly introduce practices to stimulate and encourage customers to participate in voluntary,

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discretionary, helpful behaviours toward the brand and other customers (Verleye et al., 2014). Such focus enables brands to unlock customer sharing behaviours such as increasing a customer's propensity to provide feedback/innovative ideas, and collaborating and interacting with others in brand communities (Alexander and Jaakkola, 2016; Hollebeek et al., 2016).

The increasing sophistication of online social networking services such as brand pages have enabled brands to transform passive observers to active participants and collaborators that generate new ideas (Jahn and Kunz, 2012; Hollebeek et al., 2016). Consumers are becoming pivotal authors of brand stories by sharing brand experiences via social media, linking consumers and brands (de Vries and Carlson, 2014). Although the notion of virtual communities is not new (Dholakia et al., 2004; Nambisan and Baron, 2009), the availability of powerful social networking tools makes it relatively easy to initiate conversations, gather and capture user-generated input rapidly from a large number of participants (Mount and Martinez, 2014). Understanding these processes are critical for achieving competitive advantage given advancements in social media monitoring and text analysis techniques that "listen" to, and capture, customer-generated content from brand pages for innovation purposes including product development and brand experience improvements (Moe and Schweidel, 2017; Schweidel and Moe, 2014).

Despite the promise that social media holds and the value to be extracted by brands from it through text analysis, the expected positive results for engaging customers for innovation are frequently not realized in practice. For instance, Roberts and Piller (2016) suggest that although some companies are using social media to develop new insights that lead to successful innovations, many others simply do not know how to use social media for capturing innovation opportunities. Furthermore, they argue understanding website design characteristics that facilitate dialogue and conversations with customer innovators is important to encourage cooperation and idea sharing among consumers. Therefore, understanding the mechanisms by which social media managers can design such online services to facilitate voluntary innovation-related behaviours by consumers that benefit the brand and other customers, is critical.

To fill this gap in literature, this study makes two important contributions. First, we extend the concept of CEB (Van Doorn et al., 2010; Verleye et al., 2014; Groeger et al., 2016) to examine two specific forms of CEBs related to innovation development in social media, namely 1) intention to provide feedback to improve the brand, and 2) intention to participate in collaboration with other customers in the brand community. Scholars have argued that initiating and managing customer voluntary contributions including consumer feedback and collaboration, both central to customer engagement, are foundational to innovation development efforts of firms (Dong and Sivakumar, 2017; Harmeling et al., 2017). Blazevic and Lievens (2008) argue that consumers are often underutilized sources of knowledge and that firms should harness consumer knowledge and exploit their competencies in implementing innovation activities. Research has also demonstrated that engaging consumers in inbound open innovation activities on social media to capture, and leverage, large volumes of user-generated content from *collaboration* and eliciting *feedback* are

critical to facilitate the innovation process (Mount and Martinez, 2014; Wirtz et al., 2013).

Second, the study uses the Stimulus–Organism–Response (S-O-R) paradigm (Mehrabian and Russell, 1974), to link critical online-service characteristics to innovation-related CEBs in brand pages. The paradigm suggests that environmental stimuli (S) lead to an emotional reaction (O) that, in turn, drives consumers' behavioural response (R). Based on prior online service research, we identify four pivotal online-service design characteristics as environmental stimuli (S) of a social media brand page, namely consumer perceptions of content quality, interactivity, sociability and customer contact quality. We then examine the impact of these stimuli on customer value assessments of brand learning value, entitativity value and hedonic value that reflect emotional reactions (O). To delineate a theoretically derived set of value perceptions, we draw on Consumption Values Theory and examine the impact of these value judgements (organism states) on motivating the behavioural response of customer feedback and collaboration intentions in the brand page environment.

The remainder of the paper is structured along five sections. The first section synthesizes the literature on the design and configuration of online services in social media. The second section develops the conceptual arguments and hypotheses for empirical testing. Third, the methodology, analysis and results are discussed. Fourth, implications from the results are discussed. Finally, study limitations and future research directions are presented.

## Theoretical background

### The S-O-R model

To understand how individuals respond to their environment, we build on the stimulus-organism-response (S-O-R) paradigm (Mehrabian and Russell, 1974). The model assumes an individual's perception and interpretation of an environment influences how he/she feels in that same environment that affects their behaviour. Marketing scholars later adapted the framework to retail shopping environments where this work reveals that the retail environmental stimuli induces consumers' internal states, which subsequently drive their behaviour towards the store (Baker et al., 1994). Online retail studies also show that the online-service design features (i.e. stimuli) that consumers interact with, influence internal cognitive and emotional states of consumers. The responses represent consumer behaviour, such as purchase behaviour, store exploration and online communication (Eroglu et al., 2003). For instance, Hu et al. (2016) in an online networking shopping context, operationalizes "stimulus" as website features and peers' qualities, "organism" as experiential shopping values and "response" as the purchase intention of users. Furthermore, Fang et al. (2017) found that various apps' design and performance attributes influenced psychological engagement and three types of benefit perception (i.e. hedonic, utilitarian and social) which influenced behavioural intentions in a mobile travel app context.

The S-O-R model has since been applied to the social media environment where research has investigated the impacts of technological environment cues on cognitive and emotional experiences and intentions to participate in social commerce

(Zhang *et al.*, 2014; Zhang *et al.*, 2015). Zhang and Benyoucef (2016) also find through a review of literature that “stimuli” of web-based cues include information content, interactivity, socializing and convenience.

### Web-based service characteristics as environmental stimuli (S)

Brand pages can be considered essential online services for brand communication, as it enables interactivity via web-based service processes with customers where consumers form their evaluations of them (Jahn and Kunz, 2012; Zhang *et al.*, 2014). An analysis of previous studies indicate that consumer perceptions of four pivotal online service design characteristics, namely, content quality, brand page interactivity, brand page sociability and customer contact quality are important which are discussed next.

Prior research has indicated that interesting and arousing content helps to engage and capture the attention of consumers with brands (Berger and Milkman, 2012). Researchers have identified that content quality acts as an environmental cue in determining online customer behaviour (O’Cass and Carlson, 2012; Nambisan and Baron, 2009). In the brand page environment, high information quality can make customers feel that their interactions are worthwhile, as they are gathering useful information (Gummerus *et al.*, 2012). As such, content quality in the context of this study refers to the consumer’s perception on the accuracy, completeness, relevance and timeliness of brand-related information on the brand page.

Interactivity describes the extent to which an individual can control the medium in modifying its form and content in real time (Steuer, 1992). In this study, we define it as a customer’s perception that the brand page environment can facilitate the interaction between them, the brand and other customers of the brand community. Given the brand page environment represents a virtual brand community, a customer may derive an individual experience of hedonic value as well as derive social-interaction benefits where they are able to interact, meet and communicate with people similar to themselves (Jahn and Kunz, 2012).

Perceived sociability has also been recognized as an important characteristic of social media brand communities for consumers as it increases their sense of social presence. In this context, sociability is experienced by customers through mutual interactions supported by social media technologies, where customers with similar interests discuss and comment on various aspects of the brand where social cohesiveness and a sense of community develop (Zhang *et al.*, 2015; Alnawas and Aburub, 2016). Perceived sociability makes customers believe that they are cared for, valued and helped by the brand and other customers in the online brand community (Hu *et al.*, 2016).

Finally, technology adoption studies indicate that the relative advantage of a new channel over existing channels plays an important role on continued usage intentions of a channel. For example, an individual may find that using a brand’s social media brand page is a more convenient, informative and/or entertaining way to branded content versus that of other available communication platforms (Girona and Korgaonkar, 2014). In retailing websites, O’Cass and Carlson (2012) advance e-customer contact quality and refer to it as the

effectiveness and efficiency of the firm–consumer interaction through the website versus other service touch points (such as visiting a store or contacting customer service via other means). Extending this logic to this study, a number of customer contact advantages or benefits are afforded to customers via social media. These include the speed with which one can communicate with the brand, other customers and fans of the brand. Furthermore, it allows for receiving important updates from the brand, and the brand community more broadly, about information related to their favourite brands.

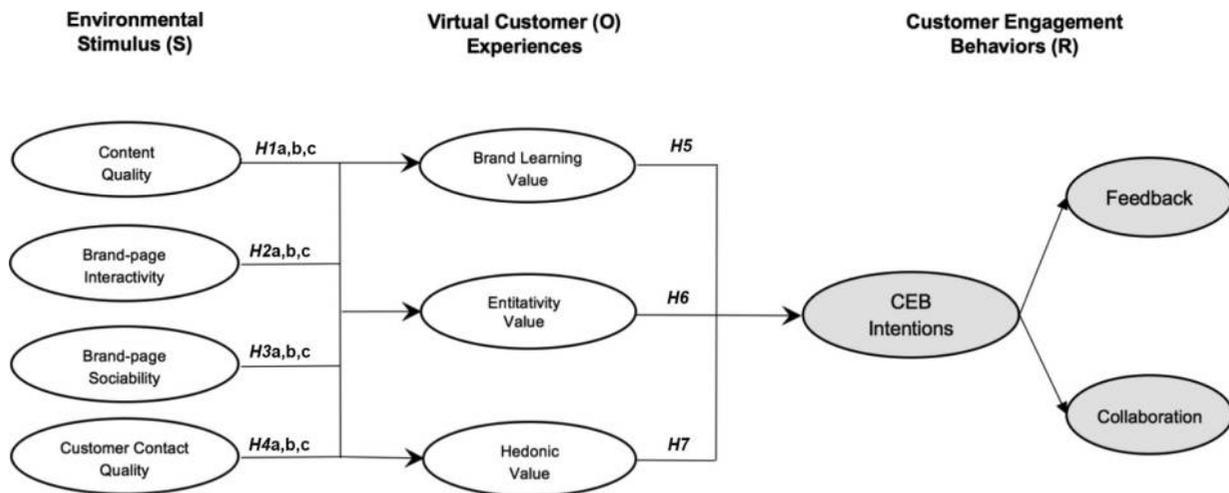
### Customer-perceived value as a customer’s organism states (O)

The S-O-R model suggests that the effects of environmental stimuli on customer behaviour are mediated through an organism state such as cognitive and emotional aspects in consumption experiences. In this context, understanding successful customer value delivery including the benefits derived from consumption experiences that directs buying behaviour, is critical (Sweeney and Soutar, 2001; Carlson *et al.*, 2015). In distilling the findings from studies on virtual communities and social media, three categories of benefits emerge namely, brand learning value, entitativity value and hedonic value, that serve as core consumption values in brand pages. We discuss each of these within the research model illustrated in Figure 1.

Previous studies have shown that many customers participate in virtual communities on company websites (Nambisan and Baron, 2009) and brand page communities (Zhang *et al.*, 2014) to learn more about specific brand offerings. Instead of searching through huge amounts of information available from a variety of digital sources, customers can easily identify specific brand information on a brand page through interaction. Through this learning process, customers may perceive that participants in a brand page (i.e. both the brand and other customers) are able to offer useful advice about the brand (e.g. brand usage), which may motivate continued interactions (Shi *et al.*, 2016). Thus, brand learning value refers to the utility derived by the customer from the brand page of cognitive benefits that relate to the brand information acquisition process (Zhang *et al.*, 2015).

In a brand page environment, the social context comprises participating customers of the host brand, the degree of interactivity among customers and the importance assigned to the group by customers, can induce what we argue entitativity perceptions. Entitativity value refers to the utility derived by the customer from the brand page of benefits from being in a single meaningful, ongoing entity, being bonded together in a coherent unit (Vock *et al.*, 2013). The degree of entitativity differentiates perceptions of mere aggregates or collections of individuals, such as people waiting at a bus stop (Igarashi and Kashima, 2011) from unified groups that are perceived as meaningful, unified entities or members of a social network service (Vock *et al.*, 2013). Findings also suggest that network entitativity depends strongly on the level of interaction among members (Igarashi and Kashima, 2011). As such, given the underlying social and relational processes of interactions on social media involving the brand, its customers and social networks (Jahn and Kunz, 2012; de Vries and Carlson, 2014), a brand page is well situated to facilitate entitativity perceptions.

Figure 1 Proposed theoretical model



**Note:** CEB intentions is a multidimensional reflective construct

Hedonic value refers to the perceived enjoyment, excitement or stimulation that customers experience by engaging with a brand page. Prior research has demonstrated the importance of the hedonic dimension in buying and consuming leisure, creative and religious activities (Williams and Soutar, 2009). Furthermore, scholars have argued that consumption in hedonic service settings often takes place in socially constructed contexts, where interactions and shared experiences with others form a crucial part of the service experience (Carlson et al., 2016). In the brand page environment, customers' interactions offer a source of highly interesting, pleasurable and mentally stimulating consumption experiences resulting from the playful interactive nature of social media (Zhang et al., 2015). For instance, there may be elements of enjoyment derived from brand information posted on a brand page by the consumer, or in the activities initiated by a brand page and other community participants (Shi et al., 2016).

### Customer feedback and collaboration intentions as response (R)

Prior research in services has advanced the notion of CEB. CEB is grounded in the Resource Exchange Theory and the Affect Theory of Social Exchange, which postulate that customers participate in voluntary discretionary behaviours with a firm, where firms should introduce practices to facilitate and manage them (Verleye et al., 2014). Verleye et al. (2014) showed that higher levels of customer affect towards the firm (i.e. positive feelings towards the firm) increase customers' likelihood to show CEBs that benefit the firm (including, feedback and helping other customers).

Findings from online brand community research provide some insight into the existence of CEB practices in groups of individuals. The idea of engaging with a community of like-minded consumers was first proposed by Algesheimer et al. (2005, p. 21) who conceptualized community engagement as "members' intrinsic motivation to interact and cooperate with community members".

In this study, a customer is exposed to various social media functions such as posting questions, freely seeking brand information, receiving feedback from brand and other community members, providing the brand feedback on brand preferences (e.g. complete a survey, post suggestions), participating in product development and helping other customers of the brand derive greater product utility (Zaglia, 2013). These functions may increase their likelihood in engaging in voluntary, innovation-related behaviour on the brand page.

Because actual behaviour is difficult to measure, we focus on behavioural intentions, namely intention to participate in customer feedback and collaborate with others in the brand community as the response variable in the model. As such, we consider customer feedback and collaboration intentions as forms of innovation-related CEBs (Van Doorn et al., 2010), which reflect the customer's intention to voluntarily participate in innovation-related behaviours with the brand, and with other customers, through the brand page on social media.

First, feedback intentions relate to voluntarily providing solicited and unsolicited evaluations of brand experiences. This could include innovation activities initiated by the brand on the brand page such as inviting customers to complete a survey, responding to polls and/or questions relating to brand ideas/product development and participating in tasks to support the brand's innovation efforts (Van Doorn et al., 2010).

Second, collaboration intentions refer to the intention to voluntarily help, support and exchange information to other customers through the brand page to improve their brand experience. Customers collaborate with others on a brand page to help solve brand-related problems, exchange valuable information and contribute to development of new innovations relating to the brand (e.g. product, services, communications) and the overall brand experience (Shi et al., 2016). In doing so, collective intelligence can form which refers to the knowledge synergies that emerge from crowd collaborations on social media through access to a diverse range of skills, capabilities and knowledge, enabling participants to blend disparate solutions in new and novel ways (Mount and Martinez, 2014).

## Hypotheses development

In sum, drawing upon the S-O-R paradigm, our theorizing (illustrated in Figure 1) proposes that consumer perceptions of online-service design characteristics of *content quality*, *brand page interactivity*, *brand page sociability* and *customer contact quality* represent stimulus (S) cues. An organism state (O) then entails customer-perceived value benefit outcomes which include brand learning value, entitativity value and hedonic value. A behavioural response (R) in our case includes CEB intentions represented by feedback intentions to improve the brand experience and intentions to collaborate with the brand page community, which reflects the final reaction to a stimulus.

### Environmental stimulus and customer-perceived value.

#### *Content quality*

Research examining website service quality in retailing (Carlson and O’Cass, 2010) and virtual community websites (Nambisan and Baron, 2009) indicates that quality of the content has a positive influence on consumer attitudes and behaviours. This effect has been corroborated by empirical evidence in the brand page environment (Jahn and Kunz, 2012; Zhang et al., 2015). Within a brand page, consumers interact with a particular brand while searching for information related to for example, brand attributes, benefits and associations that can have a profound impact on consumers’ experience (i.e. favourable/unfavourable experience) towards the brand (Ho and Wang, 2015). In this sense, an individual customer experience of finding useful and effective brand information on its brand page may then offer opportunities to enhance their learning (Hamilton et al., 2016), and maximize utility of the brand in consumption (Zhang et al., 2015). Furthermore, social media enables the brand to facilitate greater communal interaction by initiating branded content for consumption so that brand followers can generate their own content and interact with the brand, as well as with other customers (Jahn and Kunz, 2012).

Drawing upon the above discussion, we argue that favourable perceptions of content quality on the brand page will enhance, and lead to, higher levels of brand learning benefit as perceived by customers – a sense of belonging to the brand page community, and enjoyment and fun. Thus:

- H1. Content quality is positively related to (a) brand learning value, (b) entitativity value and (c) hedonic value.

#### *Brand-page interactivity*

Findings from virtual communities on websites have reported that interactivity with other members is critical in enhancing customers’ learning, sense of belonging, mutual aid and emotional attachment (Mathwick et al., 2008; Nambisan and Baron, 2009). For instance, Chiu et al. (2006) found that through close social interactions, individuals in virtual communities are able to increase the depth, breadth and efficiency of mutual knowledge exchange that also brings feelings of excitement.

In the brand page environment, customers interact with the brand through the consumption of content generated in a variety of ways. For instance, customers can interact with content created by the brand page and generated from other members on the brand page community. Customers can also interact through

the creation and sharing of content about themselves (i.e. self-presentation, helping others), their brand experiences (i.e. reflections, feedback), product ideas and concept development and how to derive greater utility from the brand (Jahn and Kunz, 2012; de Vries and Carlson, 2014; Moe and Schweidel, 2017). Through such a myriad of interactions of brand-related content on the brand page, customers are then able to provide informational and emotional support to others and develop a sense of socialization benefits (Zhang et al., 2015). As such, the greater the extent to which the interactions facilitated via the online-service design characteristics of the brand page, the greater would be the opportunities to acquire brand knowledge, along with the feelings of community bonds and enjoyment.

Based on the above discussion, we argue that higher customer perceptions of interactivity on the brand page leads to higher levels of brand learning value, entitativity value and hedonic value. Therefore, we hypothesize:

- H2. Perceived brand page interactivity is positively related to (a) brand learning value, (b) entitativity value and (c) hedonic value.

#### *Brand-page sociability*

Previous studies on consumer perceptions of sociability in social media have demonstrated that it drives a range of cognitive and hedonic benefits for customers such as stronger feelings of affection, trust, belongingness and warmth among customers (Zhang et al., 2014; Jung et al., 2014). Other studies (Alnawas and Aburub, 2016; Vock et al., 2013) state that socialization between community members is enjoyable and meaningful which then enable camaraderie to emerge. Perceived sociability with the brand page would facilitate a consumer to ascertain social connections with other like-minded customers, leading to knowledge exchange and thus enhancing his/her attitude towards the brand. This being the case, to achieve favourable consumer benefit outcomes (i.e. brand learning, sense of belonging and enjoyment), it is argued that it is a necessary condition to enhance brand page communication with high perceived sociability. As such:

- H3. Perceived brand page sociability is positively related to (a) brand learning value, (b) entitativity value and (c) hedonic value.

Prior studies have indicated that the relative customer contact advantage of an online channel plays an important role in influencing positive consumer attitudes and behaviours. For example, O’Cass and Carlson (2012) verified the effect of customer contact quality on affective judgements of satisfaction in an e-retail setting. Girona and Korgaonkar (2014) in the social media context found that perceptions of relative advantage influences attitudes towards using them. A brand page can offer better customer contact quality over other channels by providing greater interactivity and convenience to brand information, and providing mechanisms for sharing, commenting and providing feedback.

Therefore, we theorize that on a brand page in social media, the greater the extent of customer contact quality in customer interactions relative to other channels, the greater would be the opportunities for the customer to acquire useful information to

learn about the brand use such brand-related cognitive information to facilitate more social cohesiveness and sense of unity among customers, and derive enjoyment and fun. Thus, we hypothesize:

- H4. Customer contact quality is positively related to (a) brand learning value, (b) entitativity value and (c) hedonic value.

#### Customer-perceived value, customer feedback and collaboration in social media

Our conceptualization considers three critical value experiences that provide utility and benefit for the customer relating to:

- 1 brand learning value;
- 2 entitativity value; and
- 3 hedonic value which when heightened, act as drivers of customer feedback and collaboration intentions in the brand page community.

This reasoning is founded on prior perceived value theorizing that customers participate in certain behaviours in consideration of multiple utilitarian and hedonic values that they perceive as providing benefit to them evoked by brand-related stimuli (Brakus *et al.*, 2009; Sweeney and Soutar, 2001). Furthermore, drawing on social exchange theory and resource exchange theory, customers reciprocate with the firm when they derive benefits from consumption experiences (Verleye *et al.*, 2014), where they develop increased likelihood to show CEB intentions. Thus, we argue that customer-perceived value derived from brand pages induce evaluations that are favourable to reciprocating with the brand which, in turn, translate into CEB intentions towards the brand page. We expand on the effect of:

- brand learning value;
- entitativity value; and
- hedonic value on CEB intentions in the brand page environment below.

Learning and improving their skills has been found to be a key aspect of brand community participation by consumers (Algesheimer *et al.*, 2005; Nambisan and Baron, 2009). Social media platforms are particularly suited to this goal, as they allow users to post their questions freely and receive feedback from other knowledgeable members, or the brand itself (Zaglia, 2013). Furthermore, customers who have achieved learning goals in interacting with an online community are more likely to remain engaged in continuous knowledge enhancement and to offer help to others (Dholakia *et al.*, 2004).

Social media studies also demonstrate that when customers experience fun, entertainment, learning and a sense of belonging from interacting with a brand's social media presence (de Vries and Carlson, 2014), they exhibit greater behavioural intentions of eWoM, brand advocacy, feedback to the brand and disclose personal information to the brand (e.g. complete a survey) (Jahn and Kunz, 2012; de Vries and Carlson, 2014). Recent findings from consumers using brand pages on the Weibo social media platform have also shown that learning benefits influence continued use intentions (Zhang *et al.*, 2015).

Building on these studies, we argue that individuals who strongly perceive and derive value from the consumption

experience of a brand page across brand learning value, entitativity value and hedonic value are more likely to participate in customer feedback and collaboration with others in the brand page community. In doing so, they are more willing to provide feedback concerning improvements of existing products, services and brand experiences, and collaborate with other members of the brand page community to help and support their brand experience. Thus:

- H5. Brand learning value will positively impact CEBs towards the brand page.

Groups perceived as high in entitativity because of high degrees of interaction, common goals and outcomes, should derive higher degree of friendship and intimacy than less entitative groups (Vock *et al.*, 2013; Yzerbyt *et al.*, 2000). Prior studies have demonstrated community groups which are representative of high levels of entitativity can have a favourable impact on business outcomes which were attributed partly to high levels of loyalty, helpfulness and openness within the group (Grayson, 2007). The effect has also been confirmed in social media studies which showed that entitativity positively impacts behaviours such as customers' willingness to pay subscription fees to a social networking service (Vock *et al.*, 2013). Furthermore, socialization benefits influence continued use intentions of social media brand pages (Zhang *et al.*, 2014; Zhang *et al.*, 2015). Based on these findings and drawing on the view that customers reciprocate in CEBs towards a brand when they derive benefits from consumption experiences (Verleye *et al.*, 2014), it is expected that high consumer entitativity perceptions of the brand page, will influence consumers to participate in CEB intentions. Thus:

- H6. Entitativity value will positively impact CEBs towards the brand page.

Studies within social media have reported evidence that when customers experience fun, entertainment and enjoyment from a brand page, they are more willing to participate in behaviours that benefit the brand including eWoM, continued use intentions and brand loyalty (Jahn and Kunz, 2012; de Vries and Carlson, 2014; Shi *et al.*, 2016). In addition, when customers feel aroused and excited about receiving information and participating in activities on a brand page, their feelings towards a brand page are strengthened (Gummerus *et al.*, 2012). Such feelings are strong motivations of their continued interaction intention. On this basis, we argue that positive customer affect in the form of favourable perceptions of hedonic value towards the brand page will lead to higher intentions of providing feedback to the brand and collaborate with others in the brand page community. Thus:

- H7. Hedonic value will positively impact CEBs towards the brand page.

#### Methodology

##### Sample

We situate our theoretical framework within the world's largest economy of social media users, the US data were collected via Qualtrics an online market research firm. To qualify to

participate, respondents answered screening questions to a selection criteria to ensure that they had purchased their favourite brand within the past six months and were a follower of the same brand's Facebook brand page. An email invitation with a link to a survey with a brief introduction was sent to eligible participants by Qualtrics.

#### Measures

Measures were adapted from prior literature to suit the social media brand page context. Measures for content quality were drawn from Mathwick et al. (2008), brand page interactivity and brand page sociability were adapted from Jahn and Kunz (2012) and customer contact quality were adapted from O'Cass and Carlson (2012). Brand learning value were drawn from Algesheimer et al. (2005), entitativity value from (Vock et al., 2013) and hedonic value from Jahn and Kunz (2012). Measures used to assess collaboration intentions were adapted from Shi et al. (2016) and feedback intentions were adapted from Hamilton et al. (2016). We operationalize the CEB intention construct as second order in nature with collaboration and feedback intentions reflective, first-order constructs. All items were measured on a seven-point Likert scale from (1) "strongly disagree" to (7) "strongly agree".

#### Sample profile

In total, 654 responses were received with the following characteristics: 50.5 per cent male and 49.5 per cent female, average age 39.45 years and average income US\$ 50,000-74,999 per year. We tested for common method bias because we collected data from single source, and found one factor explained 47 per cent variance out of the total variance (100 per cent). This is lower than half of all variance explained indicating that common method bias was not present.

#### Estimation procedure

To analyse the proposed model, a two-step approach via standard partial least squares structural equation modelling (PLS-SEM) using SmartPLS 3.2 (Ringle et al., 2015) was followed. The study first evaluated the reflective measurement models for reliability and validity of the sample. Second, the structural models of the hypothesized paths were examined. PLS-SEM is advantageous when the goal is to further advance theoretical arguments and when the focus of analysis concerns prediction (Hair et al., 2016); both of these aspects characterize this study.

### Analysis and results

#### Evaluation of measurement scales

The evaluation of the measurement model follows established guidelines (Hair et al., 2016) and refers to the individual item reliability, internal consistency, convergent validity and discriminant validity. Individual item reliability is measured by means of the (standardized) outer loadings. As indicated in Table I, all items' outer loadings exceeded 0.70 indicating adequate item reliability. Internal consistency of the measurement scales is assessed by to the Cronbach's alpha values which all exceeded the 0.70 benchmark. Furthermore, convergent validity and average variance extracted (AVE) was assessed. In Table I, all average AVE values exceed the threshold of 0.50 and thus support the presence of adequate convergent validity.

Discriminant validity was assessed by examining the Fornell-Larcker criterion of correlations. Because the square root of each construct's AVE exceeds the correlation with any other measurement construct (see Table II), the measurement model shows adequate discriminant validity.

#### Evaluation of the structural model

We examined path coefficients ( $\beta$ ) and coefficient of determination ( $R^2$ ) to evaluate our model (Hair et al., 2016). Figure 2 demonstrates that all path coefficients are statistically significant at  $p < 0.01$ , with the exception of H2b and H4b.

The results show that the principal driver of CEB intentions is entitativity value ( $\beta = 0.58, p < 0.01$ ), although brand learning value ( $\beta = 0.21, p < 0.01$ ) and hedonic value ( $\beta = 0.14, p < 0.01$ ) have significant positive influences. The main antecedent of brand learning value was consumer perceptions of content quality ( $\beta = 0.40, p < 0.01$ ), followed by brand page interactivity ( $\beta = 0.28, p < 0.01$ ), brand page sociability ( $\beta = 0.14, p < 0.01$ ) and customer contact quality ( $\beta = 0.14, p < 0.01$ ).

Consumer perceptions of content quality ( $\beta = 0.10, p < 0.01$ ), customer contact quality ( $\beta = 0.07, p > 0.05$ ) and brand page interactivity ( $\beta = -0.04, p > 0.05$ ) demonstrate low to negative effects on entitativity value, whereas brand page sociability ( $\beta = 0.79, p < 0.01$ ) was the strongest driver of entitativity value. Finally, brand page sociability ( $\beta = 0.44, p < 0.01$ ) had the strongest positive influence on hedonic value, followed by customer contact quality ( $\beta = 0.20, p < 0.01$ ), content quality ( $\beta = 0.18, p < 0.01$ ) and brand page interactivity ( $\beta = 0.12, p < 0.01$ ).

In terms of predictive ability, we examined  $R^2$  values where the results in Figure 2 show that our endogenous latent constructs predictive accuracy indicates moderate to strong impact. For instance, the  $R^2$  values of brand learning value (0.72), hedonic value (0.66), entitativity value (0.75) and CEB intentions (0.74). We further controlled for age, income and education level and found no variables were interrelated with CEB intentions.

### Implications for theory and practice

#### Contributions to theory

The purpose of this study was to investigate the effect of online-service design characteristics that can induce customer perceived value perceptions which then stimulate customer feedback and collaboration intentions towards brand pages. By doing so, our research is the first to explicitly examine forms of CEBs related to innovation in the brand page environment. Our findings provide empirical evidence that contributes to the emerging CEB management literature by examining consumption mechanisms in social media that unlock different forms of CEBs that captures the knowledge resource of customers for innovation purposes (van Doorn et al., 2010; Verleye et al., 2014; Groeger et al., 2016).

Second, this study extends the S-O-R framework for understanding CEBs intentions in social media enabled for theoretically justifying the inclusion of various firm controllable online-service design characteristics as environmental stimuli in the social media brand page environment. Findings indicate that four online-service characteristics; content quality, brand page interactivity, brand page sociability and customer contact

Table I Measurement items and validity assessment

| Components and manifest variables  | Study 1: US (n = 654)<br>Loading (t-value) |
|--|--|
| <b>Content Quality</b>   | $\alpha: 0.84, CR: 0.90, AVE: 0.76$        |
| I find information on this brand page to be valuable   | 0.88 (80.35)*                              |
| I think this brand page is a helpful resource  | 0.89 (94.02)*                              |
| There is useful information on this brand page   | 0.84 (38.63)*                              |
| <b>Brand page Interactivity</b>  | $\alpha: 0.84, CR: 0.90, AVE: 0.75$        |
| I can get answers from the brand on this brand page  | 0.87 (59.97)*                              |
| I can interact easily with the brand on this brand page  | 0.86 (60.98)*                              |
| I am a participating user of this Facebook brand page community  | 0.87 (55.95)*                              |
| <b>Brand page Sociability</b>  | $\alpha: 0.91, CR: 0.95, AVE: 0.85$        |
| I can find out about people like me on this brand page   | 0.93 (57.71)*                              |
| I can interact with people like me on this brand page  | 0.92 (60.08)*                              |
| I can meet people like me on this brand page   | 0.92 (52.90)*                              |
| <b>Customer Contact Quality</b>  | $\alpha: 0.74, CR: 0.85, AVE: 0.66$        |
| Using this brand page is an easy way to keep informed about the activities of the brand  | 0.75 (29.39)*                              |
| It is easier to use this brand page for accessing brand-related information than other channels (e.g. visit the store, advertising, website or other social platforms) | 0.81 (45.08)*                              |
| Using this brand page is easier than using other channels to stay up-to-date about the brand   | 0.87 (62.16)*                              |
| <b>Brand Learning Value</b>  | $\alpha: 0.76, CR: 0.86, AVE: 0.68$        |
| The brand page enhances my knowledge about advancements made by the brand  | 0.84 (44.49)*                              |
| This brand page enhances my knowledge of the brand and its offerings   | 0.85 (60.53)*                              |
| The brand page helps me to obtain solutions to specific brand related problems that I have   | 0.77 (40.83)*                              |
| <b>Entitativity Value</b>  | $\alpha: 0.90, CR: 0.94, AVE: 0.83$        |
| Users of the brand page form an entity   | 0.92 (97.96)*                              |
| Users of the brand page have a bond  | 0.92 (101.56)*                             |
| Users of the brand page have many goals in common  | 0.90 (75.91)*                              |
| <b>Hedonic Value</b>   | $\alpha: 0.87, CR: 0.92, AVE: 0.79$        |
| The brand page is fun  | 0.88 (67.02)*                              |
| The brand page is exciting   | 0.89 (90.34)*                              |
| The brand page is entertaining   | 0.89 (83.25)*                              |
| <b>Feedback Intentions</b>   | $\alpha: 0.84, CR: 0.90, AVE: 0.69$        |
| When I experience a problem with the brand I intend to notify the brand page   | 0.85 (59.30)*                              |
| When I have a useful idea on how to improve the brand, I intend to communicate it on the brand page  | 0.89 (89.32)*                              |
| I intend to provide constructive suggestions to the brand via the brand page on how to improve it  | 0.90 (78.41)*                              |
| I'm willing to complete a survey/provide feedback on this brand page   | 0.64 (15.54)*                              |
| <b>Collaboration Intentions</b>  | $\alpha: 0.91, CR: 0.94, AVE: 0.84$        |
| I intend to share my ideas about the brand with other community users  | 0.91 (96.41)*                              |
| I intend to help other community users with brand issues   | 0.93 (144.99)*                             |
| I intend to get help from other community users  | 0.92 (108.97)*                             |

Notes:  $\alpha$ : Cronbach's alpha; CR: composite reliability; AVE: average variance extracted; \*meets or exceeds criterion of  $t > 1.96$

quality indirectly drive CEB intentions through customer-perceived value perceptions. What is also noteworthy is the role of brand page sociability and content quality given their strong influence across all perceived value assessments.

Third, recognizing the pivotal role of customer perceived value in determining CEB in the brand page environment, we focus attention on three constructs; brand learning value, entitativity value and hedonic value. We then validate the

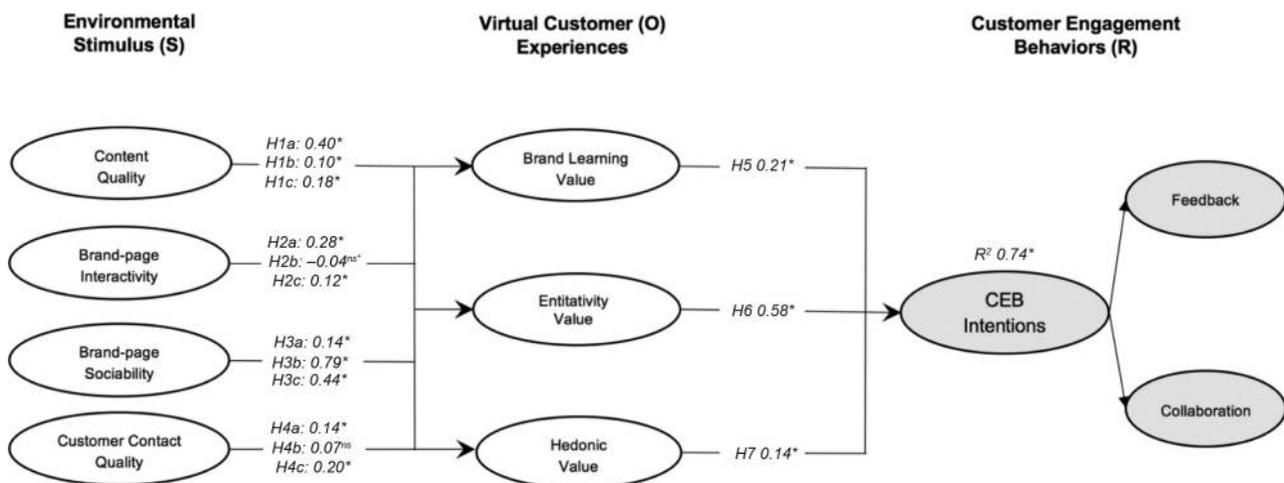
salience of these benefits arising from the four online-service characteristics in determining CEB intention. Notably, the findings show the importance of entitativity as a key driver of CEB intentions, followed by brand learning value and hedonic value. As such, this finding advances the work of [Vock et al. \(2013\)](#) in the context of entitativity value and its relevance in social media and why a customer should choose to participate in CEBs of customer feedback and collaboration behaviours.

Table II Fornell-Larcker criterion of constructs

| n = 654                     | Correlation Matrix |             |             |             |             |             |             |             |             |
|-----------------------------|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                             | 1                  | 2           | 3           | 4           | 5           | 6           | 7           | 8           | 9           |
| 1. Content Quality          | <i>0.87</i>        |             |             |             |             |             |             |             |             |
| 2. Perceived Interactivity  | 0.74               | <i>0.86</i> |             |             |             |             |             |             |             |
| 3. Perceived Sociability    | 0.59               | 0.66        | <i>0.92</i> |             |             |             |             |             |             |
| 4. Contact Quality          | 0.65               | 0.66        | 0.60        | <i>0.81</i> |             |             |             |             |             |
| 5. Brand Learning Value     | 0.78               | 0.76        | 0.65        | 0.68        | <i>0.82</i> |             |             |             |             |
| 6. Entitativity Value       | 0.58               | 0.60        | 0.86        | 0.58        | 0.63        | <i>0.91</i> |             |             |             |
| 7. Hedonic Value            | 0.65               | 0.67        | 0.75        | 0.66        | 0.69        | 0.76        | <i>0.88</i> |             |             |
| 8. Feedback Intentions      | 0.58               | 0.62        | 0.71        | 0.61        | 0.66        | 0.70        | 0.69        | <i>0.82</i> |             |
| 9. Collaboration Intentions | 0.58               | 0.65        | 0.87        | 0.58        | 0.62        | 0.83        | 0.69        | 0.71        | <i>0.92</i> |
| Mean                        | 5.92               | 5.54        | 5.50        | 5.83        | 5.23        | 5.51        | 5.56        | 5.79        | 5.47        |
| SD                          | 0.95               | 1.36        | 1.34        | 0.99        | 1.43        | 1.13        | 1.20        | 1.11        | 1.38        |

Notes: SD: standard deviation; italic values are the square root of the AVE; all others are correlations coefficients

Figure 2 Model results



Notes: Average Variance Accounted (AVA): US 0.72; \*: meets or exceeds  $t > 2.12$ ,  $p < 0.01$  (2-tailed); <sup>ns</sup>: meets or exceeds  $R^2 > 0.19$ ; <sup>ns</sup>: Non-significant

#### Contributions to practice

Managerially, the study offers implications for tailoring social media marketing approaches to *proactively develop* CEBs relating to customer feedback and collaboration intentions on brand pages with consumers to capture innovation opportunities. Our first implication suggests that brand page managers should design, optimize and manage online-service characteristics as levers to produce favourable perceptions of content quality, brand page interactivity, brand page sociability and customer contact quality that induce entitativity value, brand learning value and hedonic value. In doing so, such value creating activities should then unlock customer feedback and collaboration behaviours on the brand page with practitioners then in a position to analyse user-generated content for capturing innovation opportunities.

To induce brand learning value, managers need to focus on enhancing content quality, brand page interactivity, customer contact quality and perceived sociability. As part of the

optimization effort, particular investment needs to be placed on content quality and brand page interactivity, as they were found to be the strongest drivers. Consequently, focus should be placed on developing opportunities for customer learning such as assisting consumers to accomplish tasks, acquire knowledge, derive greater product utility and thereby be in a position to participate in customer feedback/idea generation and collaboration activities. Brand page managers can also support customer learning by initiating, leading and supporting interactive conversations among the brand community.

In terms of inducing entitativity value, managers need to focus on enhancing perceived sociability. Brand page managers are advised to lead activities that facilitate bonding among customers on their brand pages, by offering content and interactive activities that promote the exchange of ideas. In this sense, entitativity initiatives should enable a consumer's ability to socialize to realize sense of belonging benefits, and communal identity. Entitativity value plays a particularly

important role in the framework for practitioners, as it was found to be the strongest predictor of CEB intentions. Brand page managers should also be mindful of perceived interactivity in this process, which is vital in facilitating the responsiveness and connectedness with customers and among the brand page community. An innovative example of a brand creating increased entitativity through the brand page is the Finnish homeware brand, Fiskars. To facilitate the 800,000 strong brand page community feel a sense of unity and belonging, they set about creating a special name for fans of the brand; “Fiskateers”, which subsequently spawned a popular social media hashtag, “#Fiskateers”, and united brand users under this common online moniker (Forbes, 2013).

In terms of inducing hedonic value, managers need to focus on enhancing perceived sociability, customer contact quality and content quality particularly because hedonic value was found to be the strongest predictor of CEB intentions. Consequently, brand page managers should develop and facilitate opportunities for social interactions for members to meet and interact, as well as the exchange of stimulating branded content on their brand pages to enable such social interactions, that result in positive affective emotional states to enhance CEB intentions. Furthermore, enhancing content quality was found to play an important role where perceptions of ease of use and convenient access to brand content influenced hedonic value.

### Limitations and directions for future research

The research reported in this paper has a number of limitations. First, in our study, we identified two drivers of customer participation in innovation-related CEBs, namely, customer feedback and collaboration intentions. Future research can extend the model to include additional factors that capture the conceptual richness of CEBs, such as those conceptualized by Jaakkola and Alexander (2014) and Groeger et al. (2016) including influencing, augmenting, mobilizing and market/brand co-creating behaviours. Second, the study is limited by the cross-sectional nature of the research that adopts subjective survey data to assess consumers’ perceptions of innovation-related CEBs in social media where respondents might be biased with their answers or even inconsistent with their actual opinion or behaviour. Future research may use objective measurements to assess the actual CEBs on social media and how it translates to innovation opportunities for brands. Finally, the study context relied on retrospective assessments of US customers with brand pages using the Facebook social media platform to empirically assess the hypotheses. As such, future studies could explore the generalizability of the framework to other country settings and social media platforms such as Youtube and Instagram in Western markets and Weibo, WeChat in China.

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