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**Engaging customers during a website visit: A model of  
website customer engagement**

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## Engaging customers during a website visit:

### A model of website customer engagement

#### Abstract

*Purpose:* A customer's visit to a retail website is a critical 'moment of truth' during which contemporary retailers attempt to simultaneously, during a single web navigation, capture customers' attention, build rapport and prompt them to act. By showing how to capture customer commitment *over the course of a single website visit*, the concept of customer website engagement, defined as 'the process of developing cognitive, affective and behavioural commitment to an active relationship with the website', addresses strategic concerns. Drawing from literature on engagement, this study considers how retail websites can engage customers during the course of a website navigation. A conceptual model of website customer engagement underpinned by relationship marketing and communication knowledge, shows how perceptions of the website's exploration and sense-making potential can activate consumer engagement, and is then empirically tested.

*Design/methodology/approach:* Using survey data, measures of the four dimensions of engagement (interaction engagement, activity engagement, behavioural engagement, and communication engagement) and of three drivers are developed and validated. The model is tested empirically (n=301) using structural equation modelling.

*Findings:* The results support the process conceptualisation of engagement, which identifies organismic as well as conative stages, and show the distinct roles played by perceptions of informational exploration, experiential exploration and sense-making in activating engagement.

*Practical implications:* The study provides online retailing practice with an organising framework enabling online retailing managers to consider how, depending on their product

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3 category and their size, they might (re)design their website to optimally produce customer  
4 engagement.  
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7 *Originality/value:* The study contributes to online marketing and retailing knowledge by  
8 showing the relevance of the concept of engagement as it pertains to customers' single  
9 navigations on retail websites, and by empirically showing, through a parsimonious model,  
10 how engagement can be activated and unfold.  
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18 *Keywords:* customer engagement; internet retailing; website attributes; online consumer  
19 behaviour; website design; environmental psychology  
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22 *Paper type:* Research paper  
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## Engaging customers during a website visit:

### A model of website customer engagement

#### Introduction

A retail website constitutes an important touchpoint and a first online navigation can determine the future of a customer's relationship with retailers and their offerings. Retail websites host complex interactions, with online customers where communication and relational elements are inseparably interwoven, and the website's stimuli can simultaneously activate communication and relational responses. Such an interweaving of marketing communication and relational phenomena call for a considering of both domains, although marketing communication and relationship marketing have traditionally been separate managerial and scholarly concerns.

The concept of engagement, which describes a customer's experience of active connection or participation with a marketing entity (such as a brand, a firm, a website, an online community), could address the need to explain initial and on-going customer–website interactions comprehensively, by encompassing communication *as well as* relational properties. It has acquired much prominence in the practitioner literature (e.g. French et al., 2012; Gallup, 2014), reflecting marketers' compulsion to understand how, in today's overcrowded and fragmented marketing landscape, they might *simultaneously* capture customers' attention (Huddleston et al., 2015), build rapport with them and generate commitment to act. Scholarly attention has intensified recently (e.g. Brodie et al., 2013; Baldus et al., 2015; Bowden, 2009; Mollen and Wilson, 2010; Vivek, 2009; Brodie et al., 2011; Hollebeek et al., 2014).

Customer engagement can apply to a broad range of focal objects such as brands (Bowden, 2009; Sprott et al., 2009), organisations' innovation initiatives (Sawhney et al.,

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3 2005), virtual communities (Brodie et al., 2013; Baldus et al., 2015). However, the question  
4 of why and how retail websites can engage customers on their first-time or subsequent visits  
5 remains open. Although a few studies have considered engagement in an online context  
6 (Mollen and Wilson, 2010; Hollebeek et al., 2014; Calder et al., 2009; Brodie et al., 2013;  
7 Pagni and Mirabello, 2011), none so far has considered the website itself as a focal object of  
8 engagement. A possible reason for this surprising situation is that the engagement process has  
9 mostly (although not always - see for instance Mollen and Wilson, 2010; Fredricks et al.,  
10 2004) been used to characterise a succession of interactions over time, rather than being  
11 considered in the context of a single interaction.  
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23 Yet, by showing how to capture customer commitment *over the course of a single*  
24 *website visit*, customer engagement addresses strategic concerns, since websites are often the  
25 first and only touchpoint through which retailers interact with their customers. Further, when  
26 the website is the locus of the first interaction with prospects or new customers, their  
27 engagement with the website may be a *sine qua non* condition for converting them into  
28 returning visitors or customers. Additionally, customer engagement can have consequences  
29 beneficial to the marketer beyond the customer's lifetime value, through referrals, influence  
30 and the contribution of feedback to the firm (Kumar et al., 2010). As the first step on the  
31 loyalty ladder, customer engagement may be key to profitability (Brodie et al., 2011).  
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43 Consequently, this study addresses the research question of how retail websites can  
44 engage customers during the course of a website navigation. Drawing from literature on  
45 engagement and environmental psychology, the paper develops a conceptualisation and  
46 model of website customer engagement underpinned by relational and communication  
47 knowledge, which it then tests. The study contributes to online marketing and retailing  
48 knowledge by showing the relevance of the concept of engagement as it pertains to  
49 customers' single individual navigations on retail websites, and by providing insights into  
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3 how website perceptual attributes can activate website customer engagement. It provides  
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5 online retailing practice with a framework enabling them to consider how, depending on their  
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7 product category and their size, they might (re)design their website to optimally produce  
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9 customer engagement.  
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### 14 **Theoretical background: Behaviour on the web and customer engagement**

16 The interactive and vivid qualities of the internet medium have been an early focus of the  
17  
18 online marketing literature (e.g. Manganari et al., 2009). Several authors use different  
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20 terminology to study the combination of cognitive and emotional phenomena that compel  
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22 customers to attend to and interact with the stimuli of a website. One stream (e.g. Loiacono et  
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24 al., 2007; Chang et al., 2014; Park et al., 2012) have drawn from offline atmospherics  
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26 literature, to consider the ‘silent language’ (Kotler, 1973: , p. 48) of online communication,  
27  
28 with a view to designing website stimuli which produce desirable customer responses.  
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30 Another stream was initiated by Hoffman and Novak (1996), who extended the concept of  
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32 flow (Csikszentmihalyi, 1990) to online contexts, suggesting that flow promotes ‘stickiness’  
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34 with the website and enhances customer experiences (Bilgihan et al., 2015; Rose et al., 2012;  
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36 Shim et al., 2015).  
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40 Yet, the interactive nature of the internet also entails the development, during any  
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42 online navigation session, of a relationship between the customer and the website (Dennis et  
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44 al., 2009). Hence, the specific characteristics of internet behaviour such as interactivity  
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46 (Steuer, 1992), customer participation (Meuter et al., 2003) and involving experiences  
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48 (Hoffman and Novak, 1996) suggest the relevance of both relational and communications  
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50 aspects. The concept of engagement, which describes a customer’s active connection or  
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52 commitment to a relationship with a marketing entity based on an experience or set of  
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3 experiences, aptly captures the two aspects (relational and communicational) inherent in the  
4 interaction which customers develop with websites.  
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7 A review of extant typical conceptualisations of engagement (Table 1) reveals that  
8 while the concept has received much attention in the past decade from diverse disciplines,  
9 there remains much disparity about its domain and that some foci have received more  
10 attention than others.  
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25 Several general observations seem pertinent. First, with the exception of Webster and  
26 Ahuja (2006), these conceptualisations distinguish engagement from flow, involvement and  
27 interactivity because of the action orientation of engagement. Second, there is much  
28 divergence regarding the actual domain of engagement, some authors considering it as a  
29 behavioural construct, others seeing it as a strictly organismic construct, others as a process  
30 or a state within an ongoing process. Third, the process of engagement may be ongoing, i.e.  
31 applying to a succession of interactive experiences with the focal object, or it may apply to a  
32 particular experience or interaction. Fourth, there is also much diversity in terms of the focal  
33 object of engagement: a brand, a virtual community, offerings, websites, the organisation for  
34 which employees work, learning activities, or the product development and innovation  
35 activities of an organisation. Fifth, although the definitions in the marketing studies recognise  
36 the different, simultaneous roles that customers play as receivers and producers of  
37 communication, and as actors in a developing relationship with the focal object of  
38 engagement, the studies often only draw from either the marketing communication or the  
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3 relationship marketing literature, rarely from both. Sixth, empirical studies and in particular  
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5 measures of the concept remain scarce.  
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8 Several further matters arise with regard to studies that have considered the online  
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10 context. So far, the literature has not examined engagement with a website other than from  
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12 the perspective of the website representing the brand (Mollen and Wilson, 2010), the website  
13  
14 being an advertising medium (Calder et al., 2009), or social television websites where the  
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16 two-way interaction is with other viewers rather than the actual website (Pagani and  
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18 Mirabello, 2011). Yet, in a retail context, websites are far more than advertising media or  
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20 brand proxies: as environments, as service touchpoints, as the providers of multi-faceted  
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22 information about offerings, they can make or break the ‘moment of truth’ which customers  
23  
24 and prospects experience during the course of an online navigation. This moment of truth can  
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26 have heavy consequences not only on purchases, but also in terms of the customer’s  
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28 disposition towards the retailer and their degree of ‘active-ness’ (positive or negative)  
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30 towards the retailer and the website. Therefore, this paper argues that website customer  
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32 engagement is a central construct to enable retailers to understand how, over the course a  
33  
34 single navigation, they might grab customers’ attention, develop a relationship with them and  
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36 incite them to act within the context an increasingly interactive, fragmented and complex  
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38 business environment.  
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43 Alongside Bowden (2009), this paper argues for a conceptualisation which  
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45 acknowledges that engagement, rather than being only a psychological or a behavioural  
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47 construct, is a *process* construct with both organismic and conative facets, to reflect the pro-  
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49 active notion underpinning the construct and distinguishing it from related constructs such as  
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51 involvement. This approach is conducive to ‘opening the black box’ of customer engagement  
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53 and understanding how it can be activated. Furthermore, alongside Calder, Malthouse, and  
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55 Schaedel (2009), Mollen and Wilson (2010), and Webster and Ahuja (2006), this paper  
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3 conceptualises the process of website customer engagement within the context of individual  
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5 online navigation experiences.  
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8 Adapting Mollen and Wilson's (2010) definition to the focus of a marketing website,  
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10 and reflecting the conceptualisation of engagement as a process taking place during  
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12 individual navigations, website customer engagement is defined as the process of developing  
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14 a cognitive, affective and behavioural commitment to an active relationship with the website.  
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17 This conceptualisation augments retailing and customer engagement literature since  
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19 the particular focal object of engagement considered here (retail websites) has so far been  
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21 neglected in the engagement literature. Due to the breadth of possible focal objects of  
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23 engagement and the critical contextual influences on the processes underpinning customer  
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25 engagement (Brodie et al., 2011), this conceptualisation is not simply an extension of extant  
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27 theory to another context. Without conceptualisation work that takes account of the specific  
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29 object of engagement, further conceptual development and empirical attempts at measuring  
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31 and understanding the underlying elements of the engagement process would be hampered.  
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### 36 **Conceptual model**

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38 Retail websites are virtual environments, and an online navigation exposes customers  
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40 to their stimuli. As per Mehrabian and Russell's (1974) Stimulus – Organism – Response  
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42 (SOR) model, stimuli generate a sequence of reactions: organismic reactions are internal  
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44 states resulting from an immediate reaction to stimuli. In turn, they produce a behavioural  
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46 response. We develop a conceptual framework using the SOR model and drawing from  
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48 knowledge from relationship marketing and marketing communication literature to consider  
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50 both relationship building and communication aspects underpinning the customer-website  
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52 interaction on a retail website.  
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3 In a first instance, we operationalise customer engagement as a set of organismic and  
4 conative responses to interactions with the attributes of a retail website and develop  
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6 hypotheses linking the different components of customer engagement through a relational  
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8 and a communication route. Second, we use environmental psychology literature to identify  
9  
10 three relevant drivers of customer engagement and develop hypotheses regarding the manner  
11  
12 they each activate a particular route of customer engagement.  
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### 18 *Operationalising website customer engagement*

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20 The conceptualisation of website customer engagement has argued that customer  
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22 engagement interweaves relationship marketing and marketing communication phenomena.  
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24 We now deal with these in turn.  
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27 The Web facilitates relationship-building (Yoon et al., 2008). A relationship  
28  
29 marketing perspective views customer navigations on a retail website as emergent  
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31 relationships between the customer and the marketer, as the customer interacts with the  
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33 website. Li, Browne and Wetherbe (2006) argue that there exists a relationship between  
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35 websites and users that evolves over time, whose qualities in terms of trust and commitment,  
36  
37 influences stickiness intention, or the “embedding [of] a website within a user’s routine” (p.  
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39 106). This paper further posits that a single online navigation, in and of itself, also constitutes  
40  
41 a marketing relationship: during the several minutes of the navigation, a relationship  
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43 gradually develops, in which the customer discovers the manner in which the website works  
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45 and responds to requests for further content, and establishes whether it is a suitable, useful  
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47 and trustworthy website. Commitment at the end of a single navigation experience represents  
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49 the customer's *behavioural engagement* with the site in future. Prior literature confirms links  
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51 between intention and behaviour (e.g. Ajzen, 1991; Yun and Good, 2007), such that  
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3 behavioural engagement would represent the conative element of the relational interaction  
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5 between the website and the customer.  
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7 A determinant of commitment is the level of closeness and understanding experienced  
8 by the customer during the navigation. *Interaction engagement* refers to the degree of  
9 closeness that customers feel toward the website, depending on how well the site seems to  
10 understand them, adapt to them and meet expectations during the navigation session.  
11 Customers may experience interaction engagement when, during the navigation, the site  
12 behaves in a manner they understand and expect, both technically and by providing the  
13 content they anticipated from a hyperlink or a search. Feelings of identification and being  
14 understood are important because they imply that the marketer has something useful to offer  
15 the customer, or that the customer can psychologically identify with the marketer  
16 (Bhattacharya and Sen, 2003; Carlson et al., 2008). Service personnel who display  
17 interpersonal sensitivity and concern build rapport with consumers (Ashforth and Humphrey,  
18 1993), which is likely to result in intentions to maintain that rapport. . Further, two-way  
19 communication has been shown to facilitate the development of relationships with online  
20 retail brands (Yoon et al., 2008) and argued to increase engagement (Brodie et al., 2011).  
21 Hence, when consumers perceive that a retail website is able to adapt to their questions,  
22 queries and requirements, according to engagement theory and relationship marketing  
23 principles, they will be more likely to return to that website.  
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45 The 'relational route' links interaction engagement and behavioural engagement.  
46 Behavioural engagement should derive from the immediate, organismic response of  
47 interaction engagement, such that customers who feel a stronger sense of identification and  
48 adaptation with a retail website should be more willing to return to the website.  
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53 *H<sub>1</sub>: Interaction engagement with a website positively influences behavioural*  
54 *engagement engagement.*  
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3                   Alongside the relationship building view discussed above, a marketing  
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5 communication perspective views customer navigations on a retail website as conversations  
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7 between a marketer and a customer, the two parties conceivably communicating while  
8  
9 gradually building a relationship. Such a perspective would view each action by the customer  
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11 (click on a hyperlink, type in a search and press enter) as a question, which is answered in the  
12  
13 form of a new page. Thus, the interaction between the customer and the website takes the  
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15 form of a dialogue, consisting of actions and page returns. The internet enables customers to  
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17 control and choose the communication they receive from marketers (Hoffman and Novak,  
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19 1996; Ariely, 2000; Fortin and Dholakia, 2005). By virtue of this control and choice,  
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21 customers become ‘authors’ of the content they receive (Shih, 1998). This authoring can be  
22  
23 involving. *Activity engagement* refers to the level of involvement with the task of ‘producing’  
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25 communication by calling up different elements of content (clicking on hyperlinks, search for  
26  
27 key terms, calling up product photographs etc.). Involved states have motivations properties  
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29 (Mitchell, 1979; Rothschild, 1984); specifically, involved customers search for more  
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31 information (Beatty and Smith, 1987), process information better (Chaiken, 1980) and are  
32  
33 more involved with purchase decisions (Richard and Habibi, 2016). During a navigation,  
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35 customers may become more active with the website, such as when they request more pages,  
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37 explore the website more thoroughly, and pay more attention to information on the screen; or  
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39 they may remain more passive and only look distractedly at a few pages, without focusing on  
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41 anything or following through on any information.  
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47                   Beyond the communication they expose themselves to during the course of the  
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49 navigation, customers can also opt to remain in communication with the website in the future,  
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51 by registering to receive alerts, future newsletters or by bookmarking the site they visit.  
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53 Hence, *communication engagement* refers to the customer’s commitment towards future  
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55 dialogue with the website. Communication engagement is a form of commitment – which  
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3 Moorman, Zaltman, and Deshpande (1992: , p. 316) define as “an enduring desire to maintain  
4 a valued relationship.” With the internet technology though, communication engagement  
5 goes beyond desire, because customers can create a pull for future information in the here and  
6 now.  
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11 The ‘communication route’ links activity engagement and communication  
12 engagement. Hence, communication engagement is viewed as a conative response to the  
13 communication exchange between the customer and the website, which results from the  
14 immediate, organismic response of activity engagement. Specifically, more involved  
15 customers develop positive attitudes toward a site (Richard and Habibi, 2016), which prompts  
16 them to gather more information later (Richard and Chandra, 2005). To guarantee the flow of  
17 future information, customers request further communication in the present.  
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27 *H<sub>2</sub>: Activity engagement with the website positively impacts communication*  
28 *engagement on the site.*  
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32 Further, customers can form attachments to the object of involvement (Mittal, 1989;  
33 Broderick et al., 2007). Involvement has affective consequences (Mittal, 1989; Park and  
34 Moon, 2003), therefore customers experiencing a higher activity engagement are likely to  
35 develop stronger relational bonds with the website, as empirical studies show, which find  
36 relationships between website involvement and purchase intentions or approach attitudes  
37 (Kim et al., 2007; Richard and Habibi, 2016). Hence:  
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45 *H<sub>3</sub>: Activity engagement with a website positively influences behavioural engagement*  
46 *with the site.*  
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50 Additionally, the decision to request future communication from the website can be  
51 seen as evidence of the stickiness of the website, which can apply to both the duration and the  
52 frequency of a website’s visit (Roy et al., 2014; Li et al., 2006), suggesting that customers  
53 wish to remain associated with the website and will use the further communication as an  
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3 opportunity to revisit the site, for instance clicking on a hyperlink provided in an email or  
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5 online newsletter. Further, as discussed earlier, communication engagement constitute a form  
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7 of commitment to future interactions, and commitment has been identified in several studies  
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9 as an antecedent to customer loyalty to commercial websites (see Toufaily et al., 2013; Wang  
10  
11 et al., 2006). Hence:

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14 *H<sub>4</sub>: Communication engagement positively affects behavioural engagement with the*  
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16 *website.*

#### 17 18 19 20 21 *Drivers of website customer engagement*

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23 According to the SOR model (Mehrabian and Russell, 1974), the organismic responses of  
24  
25 customer engagement result from customers' perceptions of stimuli or attributes of the retail  
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27 website during their navigation (Mollen and Wilson, 2010). Following the logic of  
28  
29 Parasuraman et al's (2005) means-end framework, we chose to consider, as drivers of  
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31 customer engagement, a website's perceptual attributes (i.e. the website characteristics  
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33 comprising features, cues and functions, which are perceived by consumers as they use a  
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35 retail website) rather than concrete cues (the individual elements which constitute a website),  
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37 for two main reasons. First, cues may evolve with technology, whereas the perceptions of  
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39 these cues in people's minds are more stable; second, people may not have the technical  
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41 awareness or vocabulary to assess cues, whereas they are used to considering the more  
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43 abstract level of perceptions.  
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48 To conceptualise how customers perceive retail websites, this study adopts the  
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50 principles of Kaplan and Kaplan's (1982) Preference Framework, which stipulates that  
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52 people's two main needs in an environment are to make sense and to explore. People use  
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54 information from the environment to address these two needs. The two concepts of sense-  
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56 making and exploration are particularly apt in the context of online environments, as  
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empirically verified by Rosen and Purinton (2004), Singh, Dalal, and Spears (2005), Demangeot and Broderick (2010), and Brunner-Sperdin *et al.* (2014). Retail websites are less intuitive than offline shopping environments. They appear to the customer one page at a time, which complicates the task of making sense of the overall architecture and contents. For the same reasons, the hidden portions of the website (i.e., the parts that are not on the page on screen and are alluded to in the form of hyperlinks or clickable photographs, etc.) provide the potential for further exploration.

A website's potential for exploration can relate to both the experience of shopping, as in browsing or following links to more areas on the site, and the information that the site provides (Demangeot and Broderick, 2010). Thus, *experiential exploration potential*, or the website's ability to replicate the experience of abundance of a real retail environment, differs from *informational exploration potential*, or the provision and storage of vast amounts of searchable information (Burke, 2002) from both marketer and non-marketer sources. This distinction between two forms of exploration potential is important, because information, while not a predominant element of most landscapes and environments, is central to online marketing environments (Huang, 2000) and can add value to customers' online shopping experience (Koufaris, 2002). Regardless of whether they are browsing or engaging in goal-directed shopping, online customers are information seekers.

Customers who perceive a site as higher in experiential exploration potential likely visit more pages and become more interested and motivated (Kim et al., 2007), therefore a more active with the context (Ha and Lennon, 2010). Similarly, perceptions of high informational exploration potential should activate the same responses (Fortin and Dholakia, 2005). Hence:

*H<sub>5</sub>: Perceptions of (a) experiential exploration potential and (b) informational exploration potential positively influence activity engagement with the website.*

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3           *Sense-making potential* relates to the website's ability to facilitate the customer's  
4 orientation, navigation and task accomplishment. Customers who make sense of the website  
5 should feel more comfortable and understand the site, which in turn increases their sense of  
6 familiarity (Kaplan and Kaplan, 1982). Familiarity enables them to obtain more answers from  
7 the website, which can heighten their sense of closeness and identification. Moreover, during  
8 the navigation experience, customers who perceive the site as high in experiential exploration  
9 potential likely visit and explore more pages. Experiences produce strong emotional  
10 responses (Richins, 1997), so customers who engage in shopping experiences that are high in  
11 experiential exploration potential should develop stronger relational ties with the site.  
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22           *H<sub>6</sub>: Perceptions of (a) sense-making potential and (b) experiential exploration*  
23 *potential positively impact interaction engagement.*  
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27           Websites that offer informational exploration increase website familiarity (Richard  
28 and Habibi, 2016) and decrease levels of uncertainty towards decision-making (Mazaheri et  
29 al., 2011). Informativeness has also been found to be one of the contributors to website  
30 persuasiveness on travel websites (Kim and Fesenmaier, 2008). Hence, perceptions of  
31 informational exploration potential, by increasing familiarity with the site and decreasing  
32 uncertainty, should activate a stronger sense of feeling understood and adaptation of the  
33 website. Hence:  
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42           *H<sub>6c</sub>: Perceptions of informational exploration potential positively influence*  
43 *interaction engagement.*  
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47           Consistent with the conceptualisation of separate routes (communication and relational)  
48 to engagement, it is hypothesised that specific drivers are more effective in activating one of  
49 the two routes. Interaction engagement with the site likely relies more on the provision of  
50 relevant information, which is known to enable customers to develop trust towards the  
51 marketer behind the site (Bauer et al., 2002). Concomitantly, activity engagement is likely  
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3 more reliant on the experiential impact of the visual and immersive stimuli of the site (Fortin  
4 and Dholakia, 2005; Kim et al., 2007). Hence:  
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7 *H<sub>7</sub>: Informational exploration potential activates interaction engagement with the site*  
8 *more than it does activity engagement.*  
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10 *H<sub>8</sub>: Experiential exploration potential activates activity engagement with the site*  
11 *navigation more than it does interaction engagement.*  
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16 A visual representation of the conceptual model and the hypothesised relationships can  
17 be found (alongside hypothesis testing results discussed later) in Figure 1. Compared to other  
18 models of online shopping adoption (e.g. Dennis et al., 2009; Brunner-Sperdin et al., 2014;  
19 Wu et al., 2013; Richard and Habibi, 2016; Rose et al., 2012), the parsimonious model of  
20 customer engagement conceptualised here captures the dual challenge of relationship  
21 building and communication. It conceptualises the existence of two distinct routes (the  
22 relational route via interaction engagement and behavioural engagement, and the  
23 communication route via activity engagement and communication engagement) through  
24 which online retailers can use potent website attributes as levers to turn initial reactions into  
25 behavioural intentions.  
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#### 41 **Method and procedure**

42 Because the purpose of the research is to consider how retail websites can engage  
43 customers during a single visit by developing and testing a model of website customer  
44 engagement, a survey research method was deemed to be the most appropriate. In particular,  
45 it was preferred to an experimental design, since the design of an experimental website the  
46 and manipulation of the drivers of website customer engagement (experiential exploration  
47 potential, informational exploration potential and sense-making potential) would have  
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3 affected the realism of the participants' navigation, and therefore the study's external validity  
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5 (Hair et al., 2006).  
6

7  
8 The target population for the study was defined as consumers who shop and purchase  
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10 online regularly. A convenience sample of 301 volunteer U.K.-based students and university  
11  
12 staff was recruited to test the nomological network. The sample was recruited via  
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14 advertisements on campus, email, and via the network of student 'research assistants'.  
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16 Participation was voluntary, but respondents were given the option of entering a raffle to win  
17  
18 one of five items, the biggest prize being an iPod. In a university computer lab or at their  
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20 workstations, the respondents navigated an online bookstore for eight minutes before they  
21  
22 answered a questionnaire about their particular experience. The requirement that they  
23  
24 navigate the website before answering the questionnaire added to the difficulty of collecting  
25  
26 the data, but this procedure enabled a focus on respondents' perceptions of a specific, recent  
27  
28 navigation rather than their memories or past perceptions of a random website. This step  
29  
30 enhances the study's validity by avoiding halo or memory effects (Chen, Wigand, and Nilan,  
31  
32 1999).  
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35  
36 The product category (books) of the stimulus is a common purchase among the  
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38 respondents and increases the realism of the task. Within that product category, the study uses  
39  
40 a relatively unknown site (only 7.3% of the sample reported that they had visited it before;  
41  
42 none reported using it regularly) and therefore can capture fresh perceptions, untainted by the  
43  
44 memory of previous visits or any loyalty to the site itself. The instructions asked the  
45  
46 respondents to shop online as they would normally if they were at home, in an internet café,  
47  
48 or at their desk. The instructions also contained examples of what respondents might want to  
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50 do during the navigation session, such as "searching for a book [they] had in mind to  
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52 purchase" or "browsing."  
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3 The sample characteristics are described in Table 2. The recruitment of a convenience  
4 sample rather than the use of random sampling, due to the prohibitive costs of the latter, may  
5 affect the reliability of measures and the generalisability of the hypothesis testing results  
6 (Hair et al., 2006). Several elements mitigate these risks. First, in terms of the sample's  
7 relevance as reflective of the target population, 96.7% of the respondents had shopped online,  
8 and 94.7% had made purchases online; therefore the sample, while a convenience sample,  
9 undertook a realistic task. Additionally, while the sample, which consists of 214 university  
10 students and 87 university staff, remains a convenience sample, the nationality breakdown of  
11 the sample is reasonably reflective of the proportions of nationalities present on a UK  
12 university campus. The statistical checks carried out revealed that there were no significant  
13 differences between students and staff concerning the variables and relationships of interest,  
14 therefore both groups were combined. Half of the total sample (obtained by random split)  
15 provided input for the scale development, and the second half served scale validation  
16 purposes (Churchill, 1979). The testing of the nomological network employed the whole  
17 sample.  
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45 The procedure for developing reliable and valid measures of the seven constructs in  
46 the nomological framework followed accepted procedures (Churchill, 1979). The study  
47 operationalised activity engagement by adopting Mishra *et al.*'s (1993) involvement with the  
48 choice task measure. Convergent validity requirements (Hair et al., 2010) resulted in reducing  
49 the four-item measure to three items.  
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Measures for the model's remaining six constructs were developed (or adapted) and validated. Although some of the constructs may describe phenomena that relate to well-known constructs from relationship marketing, marketing communication, and environmental psychology literature, their application to the online context required sufficient changes, to warrant the rigorous development and validation process set out by Churchill (1979) and others (Anderson and Gerbing, 1988). These measures' items emanate from published scales (Agarwal and Karahanna, 2000; Aladwani and Palvia, 2002; Kim and Stoel, 2004; Liu, Arnett, Capella, and Taylor, 2001; Park and Kim, 2003; Venkatesh and Davis, 1996), an exploratory phase consisting of think-aloud protocols (Ericsson and Simon, 1993), and depth interviews with 19 informants.

Nine expert judges performed a sorting task of the 156 items gathered through these methods. According to the rules of interjudge reliability prevalent in marketing literature (e.g. Hardesty and Bearden, 2004), 106 items were appropriate for retention; a pilot test included these items in a questionnaire distributed to a convenience sample of 39 students. The final survey included 69 items selected on the basis of qualitative feedback, item-to-total correlations, and exploratory factor analysis. To guard against the possibility of response bias (Baumgartner and Steenkamp, 2001), each measure contained negatively worded items, and items from all seven measures appeared in a random sequence in the questionnaire.

To estimate the model, structural equation modelling was chosen in preference to other techniques such as ANOVA because this technique (1) simultaneously estimates several interrelated dependence relationships; (2) it enables the testing of indirect as well as direct relationships between constructs; and (3) can deal with relationships can include unobserved phenomena, for which measurement error is taken into account during the estimation (Hair et al., 1998). Furthermore, it is particularly well suited to permit the testing of several alternative models in order to assess their relative fit. In view of the small

percentage of missing data (which ranged from 0 to 1.3%) and its apparent randomness, imputation was preferred to any deletion method, in order to preserve the sample size and avoid estimation problems associated with the use of matrices of different sizes generated by pairwise deletions.

## Results

### *Measure validation*

Exploratory and confirmatory factor analyses helped purify and validate the measures. The Appendix provides the measures' psychometric properties. The measurement model displays acceptable goodness-of-fit: Chi-square = 893.87, degrees of freedom [df] = 474 ( $p=.000$ ); root mean squared error of approximation [RMSEA] = .054; confirmatory fit index [CFI] = .98;  $n=301$ ; square root mean residual [SRMR] = .056]. All seven measures have strong composite reliabilities, well above the recommended threshold of .60 (Bagozzi and Yi, 1988). Their average variances extracted are all above or within a few decimal points of the recommended .50 threshold (Bagozzi and Yi, 1988). The square of any correlation between two measures is less than the average variance extracted of each measure, in support of discriminant validity (Fornell and Larcker, 1981). Additionally, for each pair of variables, the analysis tested nested two-factor models, where the correlation between the two factors was set free, then set to equality. All Chi-square differences are significant at the .005 level, implying all constructs have discriminant validity. Therefore, although the measures had originally been piloted on a test sample consisting only of students, they remained valid when administered to a wider group, thus adding weight to the argument that students constitute a suitable sample for this study. The latent variables' correlations and other statistics are shown in Table 3.

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3 INSERT TABLE 3 ABOUT HERE  
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12 *Hypothesis testing*

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14 Structural equation modelling permits the test of hypothesised relationships between the  
15 constructs that constitute customer engagement and their drivers. The results suggest good  
16 model fit (Chi-square = 913.98, degrees of freedom [df] = 483; root mean squared error of  
17 approximation [RMSEA] = .055; confirmatory fit index [CFI] = .98; square root mean  
18 residual [SRMR] = .059; non-normed fit index [NNFI] = .98); Figure 1 presents these results.  
19  
20 The first set of hypotheses (H<sub>1</sub>–H<sub>4</sub>) proposes a network of relationships between the four  
21 constructs of customer engagement. The results support these four hypotheses at the .001  
22 level. The strongest relationship links activity engagement to communication engagement  
23 (.66, t = 11.31). The relationships between communication engagement and behavioural  
24 engagement (.38, t = 6.89), activity engagement and behavioural engagement (.35, t = 4.84),  
25 and between interaction engagement and behavioural engagement (.24, t = 4.16) are all  
26 significant.  
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47 Regarding the relationships between customer engagement and its drivers, the  
48 structural equation model results support H<sub>5</sub>–H<sub>6</sub> at the .05 level or higher. Informational  
49 exploration potential predicts both interaction engagement (.64, t = 7.68) and activity  
50 engagement (.39, t = 5.77); experiential exploration potential predicts both activity  
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3 engagement (.50,  $t = 6.41$ ) and interaction engagement (.19,  $t = 2.68$ ). Sense-making potential  
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5 is a weaker though still significant predictor of interaction engagement (.15,  $t = 2.48$ ).  
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7  
8 To test the final hypotheses, H7 and H8, further analysis aimed to determine whether  
9  
10 the drivers activate one route significantly more than the other. To investigate whether  
11  
12 informational exploration potential activates the relational route more than the  
13  
14 communication route, an alternative model was specified, in which the paths from  
15  
16 informational exploration potential to interaction engagement and activity engagement were  
17  
18 set equal, then free. The Chi-square difference between the two models, for one degree of  
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20 freedom, is 4.38. Therefore, informational exploration potential activates the relational route  
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22 significantly more than the communication route. In a similar investigation of whether  
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24 experiential exploration potential activates the communication route more than the relational  
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26 route, the Chi-square difference, for one degree of freedom, is 13.11. Hence, experiential  
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28 exploration potential activates the communication route significantly more than the relational  
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30 route.  
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34 The squared multiple correlations for each of the four structural equations indicate  
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36 that the model explains 73% of the variability of interaction engagement, 63% of the  
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38 variability of activity engagement, 44% of the variability of communication engagement, and  
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40 69% of the variability of behavioural engagement. The model therefore includes important  
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42 predictors of customer engagement.  
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46 At best, a good fit between a model and the data indicates that the model provides a  
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48 possible explanation of a phenomenon; therefore, an alternative model provides a means to  
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50 assess relative fit. An alternative model was also tested, which features the four components  
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52 of customer engagement as direct consequences of the three drivers, such that experiential  
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54 exploration potential and informational exploration potential are antecedents of all four  
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56 components, whereas sense-making potential is an antecedent only of interaction engagement  
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3 and behavioural engagement. The antecedent–consequence relationships among the four  
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5 components of customer engagement do not appear in the alternative model. Its goodness-of-  
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7 fit indices reveal a far worse fit (Chi-square = 1045.34,  $df = 482$ ; RMSEA = .062; CFI = .97;  
8  
9 SRMR = .065). The comparison and resulting Chi-square difference of 131.36 (one degree of  
10  
11 freedom) add further support to the two-step model of customer engagement developed here.  
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## 16 Discussion

### 18 *Theoretical implications*

20 Building on initial conceptualisations of customer engagement (Mollen and Wilson, 2010;  
21  
22 Brodie et al., 2011; Vivek, 2009; Bowden, 2009; Hollebeek, 2011; van Doorn et al., 2010),  
23  
24 this paper has proposed and tested a model of website customer engagement. Structural  
25  
26 equation modelling results empirically support the two-step model that was developed and  
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28 the hypothesised relationships between customer engagement and its three drivers. It also  
29  
30 confirms the existence of two distinct routes to customer engagement, which can be activated  
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32 separately by manipulating different website attributes.  
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36 This study offers four major implications. First, by distinguishing between organismic  
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38 and conative responses, the model of customer engagement specifies, in interaction  
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40 engagement and activity engagement, two distinct means of activation which prompt  
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42 customers' desirable behaviours, namely, behavioural engagement and communication  
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44 engagement. Both organismic responses predict behavioural engagement; activity  
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46 engagement also affects communication engagement, which in turn influences behavioural  
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48 engagement. Therefore, the model confirms the existence of both organismic and conative  
49  
50 facets to engagement (Brodie et al., 2011) and clarifies the sequence of the responses to  
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52 website attributes and pinpoints the importance for retailers of designing websites able to  
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54 generate, concurrently, a close interaction with the site and an active experience. The  
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3 predictive importance of activity engagement on both communication and behavioural  
4 engagement supports the proposition that participation in the production or delivery of a  
5 service (in this case, online retail shopping) is an antecedent of long-term customer  
6 engagement (Brodie et al., 2011).  
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11 Second, the findings support the existence of two distinct routes to customer  
12 engagement: experiential exploration potential activates activity engagement more than it  
13 develops interaction engagement, which suggests a marketing communication route; and  
14 informational exploration potential develops interaction engagement more than it creates  
15 activity engagement, which suggests a separate relationship marketing route. Different kinds  
16 of exploration potential therefore appear to activate different routes. While other models of  
17 online consumer behaviour (e.g. Richard and Habibi, 2016; Rose et al., 2012) have tended to  
18 privilege the communication and experiential side of consumer interactions with websites,  
19 our results show the similarly significant importance of the relationship route, which can be  
20 activated by the informativeness of the retail website. While website informativeness has  
21 been considered in earlier studies (e.g. Richard, 2005; Richard and Habibi, 2016; Mazaheri et  
22 al., 2011; Hausman and Siekpe, 2009), its influence on relationship building online has not  
23 been investigated.  
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40 Third, the study finds that activity engagement is more the result of experiential  
41 exploration potential than informational exploration potential, re-emphasising the importance  
42 of experiences in online shopping and service situations (Malthouse and Calder, 2011; Rose  
43 et al., 2012; Ding et al., 2010). Although customers may start a navigation with purely  
44 utilitarian intentions, their ultimate commitment to the site is enhanced by its experiential  
45 potential.  
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53 Fourth, a particularly interesting finding is that informational exploration potential  
54 activates the relational route of engagement more than its communication route. This  
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3 suggests that in the absence of any human being during the navigation, the provision of  
4 abundant information can help develop a sense of closeness and understanding with the site.  
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7 In the absence of service personnel, a B2C website's depth of information may enhance the  
8 relationship between the customer and the site, possibly by building trust through the  
9 provision of quality information (Li et al., 2006; Porter and Donthu, 2008). This result also  
10 echoes Sicilia and Ruiz's (2010) finding that even under high information load conditions,  
11 attitudes towards a website remain high, although a decline in cognitive processing happens  
12 beyond a certain level.  
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### 23 *Implications for practice*

24 When conceiving their website, retailers face the major challenge of designing an  
25 environment that can engage prospects and customers within the few minutes of a single  
26 navigation. This study provides an organising framework that enables retailers to deploy their  
27 online investments strategically towards this purpose.  
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34 The study identifies specific drivers that, by activating specific organismic responses,  
35 are able to commit customers to act. The two main activators of customer engagement,  
36 experiential exploration and informational exploration potential, work in a complementary  
37 manner. However, the study also provides more specific insights into which driver can be  
38 used to the most effect to develop relational or communication elements on online  
39 touchpoints.  
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47 To develop the relational route of customer engagement, retailers can focus on  
48 enhancing their website's potential for informational exploration. In particular, bearing in  
49 mind that the website may be the first and only touchpoint which customers or prospects  
50 access, retailers should ensure that the information they provide is sufficient to enable  
51 customers to complete their task. That task may simply be a general search, or the purchase  
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3 of a needed item. For this purpose, adaptive websites that enable retailers to model customer  
4 online behaviour by comparing their first few steps on the website with generic models of  
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7 behaviour, can more successfully pattern the subsequent pages they present to customers after  
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9 their particular preferences, thus enhancing the likelihood of stronger interaction engagement,  
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11 and stronger behavioural engagement. The strong relationship between informational  
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13 exploration potential and interaction engagement also suggests that service providers and  
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15 marketers of credence goods can go some way towards overcoming the challenges of human-  
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17 less online operations, by developing their customers' interaction engagement through the  
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19 abundant provision of information online. Taking account of the results presented here,  
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21 together with those by Sicilia and Ruiz (2010) mentioned in the last section, retailers would  
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23 be well advised to provide as much information on their website as they can, since this  
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25 information serves, among other purposes, to build the relationship commitment of their  
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27 customers.  
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32 To develop the communication route of customer engagement, marketers can focus on  
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34 enhancing their website's potential for experiential exploration. The study results reinforce  
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36 the importance of the experience of the navigation, which prompts activity engagement as  
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38 well as, to a lesser degree, interaction engagement. Retailers, therefore, need to develop the  
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40 experiential intensity of their website. Several individual elements can contribute to the  
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42 development of a richer experience (Demangeot and Broderick, 2006), such as interactive  
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44 images (Fiore et al., 2005), 3-d representations of products, or even environments in virtual  
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46 worlds such as Second Life (Hoffman and Novak, 2009).  
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50 Finally, and importantly, rather than the judgment of expert website designers or  
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52 marketers that might be measured through 'objective' scales, engagement is activated by  
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54 customers' *perceptions* of website attributes. Accordingly, this study has developed valid  
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56 measures that retailers can usefully administer to test-customers to evaluate the ability of  
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3 their website to induce customer engagement, and to compare it with best-in-class or  
4 competitor websites. Retailers' main aim remains to ensure that the features and devices  
5 developed by the website designers work together, coherently, at enhancing customers'  
6 overall perceptions of experiential and informational exploration potential. In this sense, the  
7 constructs used here constitute a valuable 'vocabulary' for retailers to use when considering  
8 the performance or objectives of the website.  
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16 It is important to acknowledge that the potential for experiential exploration may be  
17 more costly to enhance than the potential for informational exploration since it typically  
18 involves much larger outlays to acquire advanced technology. Such investments are not at the  
19 disposal of all retailers. Smaller-scale retailers may therefore use the framework to realise  
20 that they may not be able to develop the communication route as powerfully as their larger  
21 competitors, in which case they should further emphasise the priority of making the most of  
22 the relational route, by maximising the website's informational exploration potential.  
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32 Finally, the results of our study can also be considered in the light of emerging  
33 business practice. In this respect, several observations appear pertinent. First, the importance  
34 of communication engagement and the communication route overall can be seen in the  
35 increasing number of alternative platforms (e.g. Facebook, Instagram, YouTube) on which  
36 retailers seek to gain their customers' communication engagement, hence also prompting  
37 further behavioural engagement. The different platforms, through their different  
38 functionalities, operate differently in potentially activating further activity engagement on the  
39 retail website. Second, the importance of informational exploration potential as a driver of  
40 customer engagement can be related to the increasing amount of content, whether retailer- or  
41 user-generated, displayed on retail websites. Third, the importance of the experiential  
42 exploration potential of a website can be related to the increasing use of technical means such  
43 as videos, auto-scrolling images, multiple views of a product, etc. used to enable consumers  
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3 to have a vivid experience an online store and its products. Fourth, consistent with the  
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5 findings of this study showing the weak role of sense-making potential in comparison to  
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7 experiential exploration potential and informational exploration potential, practitioner  
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9 conversation, which was initially focused on designing for functionality and ease of use, has  
10  
11 now shifted towards the issues designing for experience and information, as attested by a  
12  
13 number of 'how to' guides published in practitioner media (e.g. Schiff, 2015; McCreary,  
14  
15 2015). Fifth, let us also note that the elements of the experiential exploration potential and  
16  
17 informational exploration potential of websites are now increasingly being used in brick and  
18  
19 mortar environments such as Audi City, Primark, or New Balance (Charlton, 2013).  
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## 24 25 **Conclusion**

26  
27 This study contributes to online marketing and retailing knowledge by empirically showing  
28  
29 the relevance of the concept of engagement in the context of online retail environments and  
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31 explaining how perceptions of website attributes activate engagement. In essence, this study  
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33 'opens the black box' of customer engagement in the context of retail websites, critical  
34  
35 touchpoints accessed by customers and prospects alike. In a single, parsimonious model, the  
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37 study has conceptualised and tested relationships between the four facets of engagement and,  
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39 as antecedents, perceptions of informational exploration, experiential exploration, and sense-  
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41 making. In the process, it provides psychometrically valid measures of four dimensions of the  
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43 engagement process and their drivers within an online retailing context.  
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48 Nevertheless, the study suffers from several limitations. The sample is a convenience  
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50 sample; however due to their above-average internet literacy, the university students and staff  
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52 who make up the sample are probably more representative of future customers, for whom  
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54 marketers need to plan. In addition, this study focuses on a single product category, and the  
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56 main survey related to a single website, although measure development utilised two different  
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3 websites. Books tend to be involving; however, the relational route to engagement may be  
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5 more prominent for product categories associated with higher levels of risk.  
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7 The study centres on the one-to-one interaction between online retailers and  
8  
9 customers, without considering customers' ability to influence other customers through word-  
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11 of-mouth or recommendations in social media. Further research should examine the strength  
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13 of each route for activating customers' desire to produce recommendations or tell friends  
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15 about the site. Does each route elicit a different kind of word-of-mouth activity? A cross-  
16  
17 sectional design limits the study's claim of causality. Further research could consider the  
18  
19 relative effects of experiential and informational exploration potential by experimentally  
20  
21 manipulating the attributes of a website.  
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24  
25 Additional research, in particular interpretive research, should attempt to provide a  
26  
27 deeper understanding of the process by which retail website attributes activate customer  
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29 engagement. How does the potential for experiential exploration activate activity  
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31 engagement, and what specific features are most successful in doing so? Similarly, how does  
32  
33 the potential for informational exploration activate interaction engagement, and what  
34  
35 particular features or interactions produce higher levels of such engagement?  
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38 As conceptualised and empirically validated in this article, the parsimonious  
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40 nomological network of website customer engagement contributes to elucidating the dual  
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42 marketing challenge of communication and relationship building. The identification of two  
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44 distinct mechanisms through which website attributes activate engagement confirms the  
45  
46 strategic importance of the phenomenon and endows it with sound theoretical foundations  
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48 within a context of strategic importance to all retailers.  
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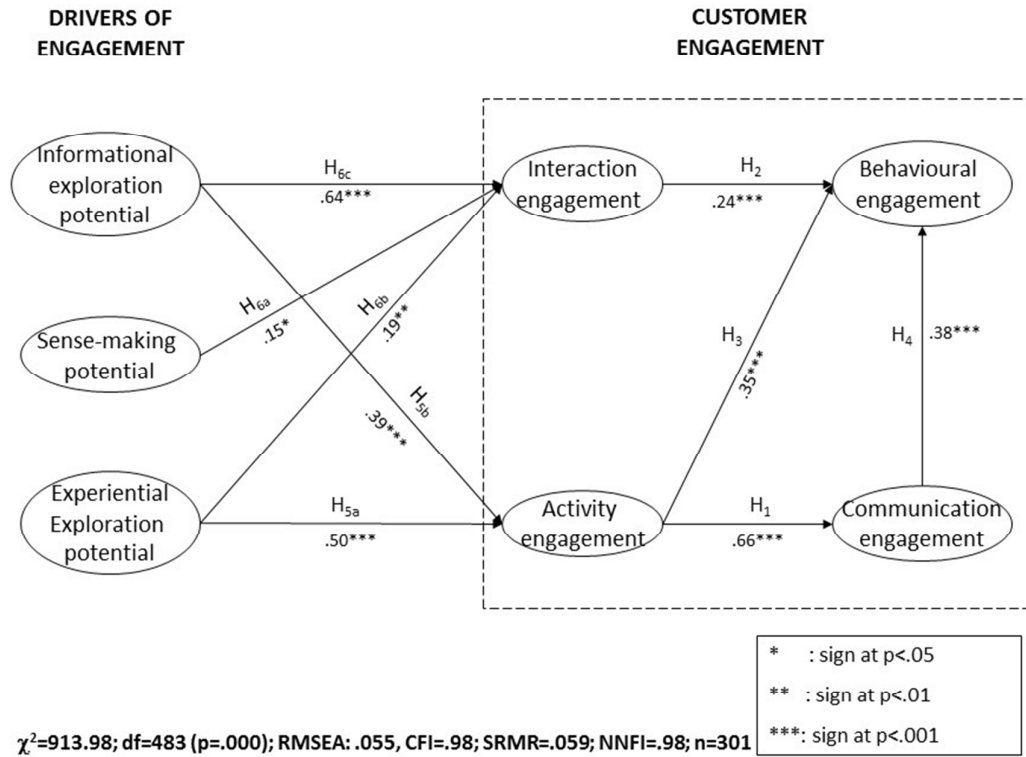
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Figure 1: Nomological net of website customer engagement and hypothesis testing results



\* Distribution Manager

Table 1: Main Extant Conceptualisations of Engagement

Author(s)	Focus of engagement	Definitional notions	Domain	Literature base of conceptualisation	Measurement developed?
Baldus <i>et al.</i> (2015)	Online brand community	'the compelling, intrinsic motivations to continue interacting with an online brand community'	Motivational state	Consumer motivations	11 dimensions of motivations to engage
Bowden (2009)	Brand	'a psychological process that models the underlying mechanisms by which customer loyalty forms for new customers of a service brand as well as the mechanisms by which loyalty may be maintained for repeat purchase customers of a service brand.'	Ongoing process	Relationship marketing	No
Brodie, Hollebeek, Juric and Ilic (2011)	All foci	'a psychological state that occurs by virtue of interactive, cocreative experiences with a focal agent/object (e.g. a brand) in focal service relationships. [...] It is a multi-dimensional concept subject to a context-specific and/or stakeholder-specific expression of relevant cognitive, emotional and/or behavioural dimensions.'	State within an ongoing process	Relationship marketing	No
Brodie <i>et al.</i> (2013)	Virtual community	'a context-dependent, psychological state characterised by fluctuating intensity levels that occur within dynamic, iterative engagement processes'	State within an ongoing process	Relationship marketing	No

Author(s)	Focus of engagement	Definitional notions	Domain	Literature base of conceptualisation	Measurement developed?
Calder <i>et al.</i> (2009)	Web site as advertising medium	manifested in specific experiences with the Web site, and which causes one to feel connected towards the focus of engagement	Organismic, relates to specific experience	Marketing communication	Personal engagement, social-interactive engagement
Hollebeek <i>et al.</i> (2014)	Brand	'a consumer's positively valenced cognitive, emotional and behavioural brand-related activity during, or related to, specific consumer/brand interactions'.	State within an ongoing process	Relationship marketing	Cognitive processing, affection, activation
Kahn (1990)	Employees' organisation	'the simultaneous employment and expression of a person's 'preferred self' in task behaviours that promote connections to work and to others, personal presence (physical, cognitive, and emotional), and active, full role performances'.	State within an ongoing process	Job design	No
Kearsley and Shneiderman (1998)	Learning activities	'all student activities involve active cognitive processes such as creating, problem-solving, reasoning, decision-making, and evaluation. In addition, students are intrinsically motivated to learn due to the meaningful nature of the learning environment and activities'	Organismic and behavioural	Education	No

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Author(s)	Focus of engagement	Definitional notions	Domain	Literature base of conceptualisation	Measurement developed?
Mollen and Wilson (2010)	Web site as personalising a brand	'a cognitive and affective commitment to an active relationship with the brand'	State (emotional and cognitive) within one interaction	Communication	No
Pagani and Mirabello (2011)	Social television Web site	'a collection of qualitative experiences with the medium'.	Organismic within an ongoing Web site relationship	Marketing communication	Personal engagement; social-interactive engagement
Sawhney, Veronba and Prandelli (2005)	Product development and innovation	(no definition given)	Behavioural	Marketing communication	No
Sprott, Czellar and Spangenberg (2009)	Brand	'an individual difference representing consumers' propensity to include important brands as part of how they view themselves.'	Individual trait	Branding	Brand engagement in self-concept
Van Doorn et al. (2010)	Brand	'Customers' behavioural manifestation toward a brand or firm, beyond purchase, resulting from motivational drivers such as word-of-mouth activity, recommendations, helping other customers, blogging, writing reviews.'	Behavioural	Branding	No
Author(s)	Focus of	Definitional notions	Domain	Literature base of	Measurement

	<b>engagement</b>			<b>conceptualisation</b>	<b>developed?</b>
Vivek (2009)	Offerings, brands, firms, activities	'the intensity of consumers' participation and connection with [the focus of engagement]'	Behavioural	Relationship marketing	Customer engagement
Webster and Ahuja (2006)	Web site	More passive state than flow and involvement	Cognitive state within one interaction	Information systems	Engagement with the information system
This study	Website	'the process of developing a cognitive, affective and behavioural commitment to an active relationship with the website'	Ongoing process	Marketing communication and relationship marketing	Interaction engagement, activity engagement, behavioural engagement, communication engagement

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Table 2: Sample Characteristics

<b>Sample characteristics</b>	
Sample size	301
University students	214
University staff	87
Sample's nationalities	
British	71.4%
Asian	15.9%
Other European	8.6%
American	2.0%
Middle Eastern	1.0%
African	.7%
Unknown	.3%
Percentage of sample that has shopped online	96.7%
Percentage of sample that has made purchases online	94.7%

Table 3: Means, Standard Deviations and Correlations of Variables

Variables	M	SD	1	2	3	4	5
1 Behavioural engagement	2.51	1.10					
2 Communication engagement	2.09	.97	.70				
3 Activity engagement	2.80	.89	.58	.68			
4 Interaction engagement	3.11	.84	.59	.31	.46		
5 Experiential exploration potential	2.60	.90	.55	.54	.67	.58	
6 Informational exploration potential	3.28	.80	.56	.36	.54	.66	.65
7 Sense-making potential	3.88	.83	.35	.20	.29	.57	.37

Notes: all correlations significant at  $p < 0.05$  (two-tailed) level.

## Appendix: Measures developed and validated for this study

Construct/Item Wording	Composite Reliability	Average Variance Extracted	Completely Standardized Loading (t-Value)
<b>Activity engagement</b>	<b>.85</b>	<b>.65</b>	
The navigation was stimulating			.79 (t=14.66)
The navigation was enjoyable			.81 (t=15.19)
The navigation was exciting			.82 (*)
<b>Interaction engagement</b>	<b>.81</b>	<b>.51</b>	
Interacting with the website gave me answers to my questions			.71 (t=12.38)
I felt as if I was actually getting answers to what I was after on this website			.65 (t=11.08)
This website didn't understand what I'm interested in (R)			.71 (t=12.40)
This website didn't understand my needs (R)			.79 (*)
<b>Communication engagement</b>	<b>.90</b>	<b>.70</b>	
If the website had a function enabling me to register for email alerts, I would register.			.87 (t=23.90)
I would refuse to let this website contact me for special offers or promotions (R)			.57 (t=11.23)
I would like this website to keep in touch with me through email.			.90 (t=26.61)
I would register to receive newsletters from this website			.94 (*)
<b>Behavioural engagement</b>	<b>.94</b>	<b>.80</b>	
I will visit this site first when I want to buy books			.78 (t=18.72)
I plan to use this website in the future			.90 (t=26.38)
I intend to continue using this website in the future			.95 (t=30.30)
I expect my use of this website to continue in the future			.92 (*)



1	<b>Experiential exploration potential</b>	<b>.77</b>	<b>.46</b>	
2				
3	This website was incapable of reproducing the excitement of shopping (R)			.63 (*)
4				
5	This website replicated the kind of experience I have when I shop			.67 (t=9.26)
6				
7	When I navigated this website I felt I was shopping for real			.70 (t=9.51)
8				
9				
10	The experience of shopping was not there when I navigated on this site (R)			.73 (t=9.78)
11				
12	<b>Informational exploration potential</b>	<b>.84</b>	<b>.46</b>	
13				
14	I could learn a lot about the products			.71 (t=12.46)
15				
16	This website provided complete product description			.60 (t=10.21)
17				
18	This website adequately met my information needs			.78 (*)
19				
20	This site had insufficient product information (R)			.71 (t=12.32)
21				
22	There wasn't enough information on this website to make a purchase decision (R)			.60 (t=10.27)
23				
24	There was enough information on this website to assess the products			.65 (t=11.14)
25				
26				
27				
28				
29	<b>Sense-making potential</b>	<b>.88</b>	<b>.47</b>	
30				
31	The content on the website was clear			.80 (t=11.79)
32				
33	The information on this website was disorganized (R)			.65 (t=9.93)
34				
35	The organization of the information presented on the screen was confusing (R)			.66 (*)
36				
37	The content on this site was well organized			.67 (t=10.27)
38				
39	My interaction with this website is clear and understandable			.75 (t=11.22)
40				
41	The web pages were easy to read			.70 (t=10.55)
42				
43	The links and buttons on this website made sense			.64 (t=9.78)
44				
45	The categories and buttons were difficult to understand (R)			.63 (t=9.73)
46				
47				
48				
49				
50	$\chi^2=893.87$ , $df=474$ ( $p=.000$ ); $RMSEA = .054$ ; $CFI = .98$ ; $n=301$ ; $SRMR = .056$			
51				
52	<i>*The metric for each scale was established by fixing one of the construct indicators to 1.00.</i>			
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54	<i>(R): Item was reverse-scored.</i>			
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