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Online brand community: through the eyes of Self-Determination Theory

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Abstract

Purpose – The purpose of this paper to use Self-Determination Theory (SDT) to explain the online brand community (OBC) identity internalization process through brand website interactivity. Secondary purpose of the research is to explore the role of several individual difference factors and brand-specific constructs in predicting brand website interactivity.

Design/methodology/approach – This study proposes the OBC motivation development continuum of brand website interactivity. Thus, a national panel was collected by a reputable online survey firm and a structural equation model was used to test the proposed model.

Findings – The authors examined four brand-related antecedents and mediators (brand engagement in self-concept, susceptibility of normative influence, opinion leadership, and consumer innovativeness) and found evidence of the differing roles that brand engagement in self-concept and purposive motives play as mediators to brand website interactivity.

Practical implications – Marketing managers can use the proposed model as a useful tool for understanding ways to target and motivate segment specific consumers in ways that will increase the effectiveness of managers' OBC building strategies.

Originality/value – This study utilized SDT to explain the internalization process of brand website interactivity. Further, several individual difference factors were explored as antecedents and mediators of brand website interactivity.

Keywords Internet, Internet marketing, Consumer behaviour, Social networks, Community networks, User involvement

Paper type Research paper

Introduction

As of June 2014, more than 277 million Americans spent an average of 32 hours each week online (www.internetworldstats.com). With such a large percentage of internet usage, it is not a surprise that globally Coca-Cola has 90 million Facebook likes, Nike has 4.1 million Twitter followers, and Coach has 504,000 Instagram followers. This online activity has not gone unnoticed by businesses and other like-minded organizations. As more Americans spent time surfing the web, web advertising gradually increased such that, in 2012, internet advertising buys in the USA exceeded those in print for the first time (www.marketingcharts.com, accessed, November, 2014). This marked a systemic shift in brand communication strategies. A key part of the success of these strategies has been the presence and influence possibilities of online brand communities (OBCs). Dholakia *et al.* (2004, p. 241) define OBCs "as consumer groups of varying sizes that meet and interact for the sake of achieving personal as well as shared goals of their members." Since 2004, OBCs have grown exponentially with almost 50 percent of the top 100 global brands have established an OBC (Manchanda *et al.*, 2015).

Some consumers interact with OBCs through brand sponsored social media outlets including Facebook, Twitter, Pinterest, and Instagram. For example, many report that they are more likely to buy and recommend brands that they like or follow on Facebook (http://blog.cmbinfo.com/press-center-content/bid, accessed, September 2014). These trends point to the importance of brands using OBCs to build and maintain consumer-brand connections. Patterson (2012) states that, "computer mediated communication[s] […] have transformed consumers from silent, isolated, and invisible individuals, into a noisy, public, [this is an] even more manageable than usual, collective."

This study adds to the OBC literature in three key ways. First, we propose the OBC motivation development continuum model, which is supported by Self-Determination Theory (SDT) (see Figure 1). Second, we develop a model that accounts for individual differences for consumer-brand identities within a nomological net. Unlike previous research, which has focused on generalized individual motives (e.g. Algesheimer *et al.*, 2005; Fiedler and Sarstedt, 2014), we follow Schmitt's (2012) recommendation to test the role of brand engagement in self-concept (Sprott *et al.*, 2009) as a mediator and predictor of BW interactivity. Brand engagement in self-concept is "consumers' propensity to include important brands as part of how they view themselves" (Sprott *et al.*, 2009, p. 92). We also include a second mediator and predictor of BW interactivity, purposive motives. Purposive motives are "the values derived from accomplishing some pre-determined instrumental purpose (including giving or receiving information)" through online community participation (Dholakia *et al.*, 2004, p. 244). Finally, this study builds on Zhou *et al.* (2012), who found initial theoretical and empirical support for brand relevant outcomes (e.g. brand attachment, identification, and commitment) that stems from OBC identification and commitment. However, Algesheimer *et al.* (2005) argue that brand quality influences brand community identification and, in turn, brand community interaction. This suggests that brand-related constructs may also be antecedents. To explore this, we draw upon the literature to explore the antecedents of susceptibility to normative influence (Bearden *et al.*, 1989), consumer innovativeness (Truong, 2013), and opinion leadership (Huffaker, 2010).

Consequently, utilizing a US sample, our model distinguishes between brand engagement in self-concept, purposive motives, and three brand-related antecedents (consumer innovativeness, susceptibility to normative influence, and opinion leader). In doing this, we are able to find initial support for the proposed OBC motivation development continuum model. Results suggests that brand engagement in self-concept and purposive motives are significant predictors in BW interactivity
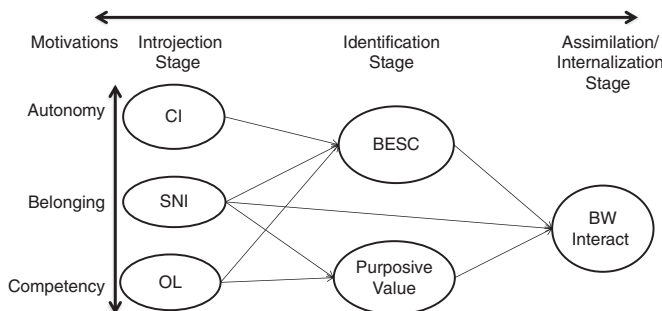
Figure 1.
OBC motivational
development
continuum

and, by studying the impact of the strength of consumers' brand relationships, we are able to extend the literature beyond the traditional use of purposive motives as a mediator and antecedent.

Theoretical development

OBC

Research on OBCs has thus far followed three major research streams: consumer motivation, consumer-organization, and consumer solicitation strategies. In the first strand, Jahn and Kunz (2012) examined consumers' general motivations for engagement with brand fan pages, Adjei *et al.* (2010) examined large virtual network brand communities, and Zaglia (2013) studied sub-groups within larger OBCs. Wang *et al.* (2012) studied individual factors (perceived community importance, perceived social interactions, and perceived community interactivity) that lead to brand community commitment. Teichmann *et al.* (2015) examined the role intrinsic and extrinsic motivations and the impact company-hosted vs consumer – hosted OBCs had on content contribution. Finally, Chen *et al.* (2013) investigated OBC members' motivations to contribute knowledge to the community members.

In the second strand, Wirtz *et al.* (2013) studied consumer-organization OBC engagement, Jayanti and Singh (2010) studied learning through knowledge transfer, Wang *et al.* (2012) took up socialization, Molesworth and Denegri-Knott (2007) added recreation, Seraj (2012) took on the formation of online community culture. Tsai and Men (2014) examined the cross-cultural effect of brand engagement on social network sites.

The third most significant relevant strand in OBC research lead by Leimeister *et al.* (2006) has focused on building relationships with current and potential consumers to solicit innovative ideas for products or services, to obtain insights about future trends and needs, with a number of notable others examining methods to induce value co-creation (McWilliam, 2012). With one notable exception, Zhou *et al.* (2012), as noted, investigated general motives for brand website interactivity (BW interactivity). However, across all streams of literature, investigation of OBCs for brand-specific practices has been scant. Further, a majority of these streams used social identity theory or uses and gratification paradigm as a theoretical underpinning. Consequently, when the context shifts from information gathering to communication strategy, business scholars and managers are left without a way to effectively use the information they have gathered, and they use theories that do not explain the overall theoretical motivation for brand website interactivity.

SDT

As noted, most research on OBCs has utilized social identity theory and the uses and gratification paradigm to determine consumer identification and interactivity in OBCs and other media channels (e.g. Carlson *et al.*, 2008). We believe, however, that SDT (Deci and Ryan, 2000) will be more useful in determining consumers' motivations to, and internalization of OBCs because within the context of an OBC, consumers' innate needs can become a motivational catalyst and thus operationalized. SDT highlights the importance of individuals' motivations in attaching their identity to an object (Ryan and Deci, 2000). Deci and Ryan (1985, p. 7) suggests that SDT is "motivational rather than cognitive because it addresses the energization and the direction of behavior and it uses motivational constructs to organize cognitive, affective, and behavioral variables." According to SDT, individuals are motivated to satisfy three innate psychological needs: competency, relatedness, and autonomy (Ryan and Deci, 2000).

Competency is an individual's need to feel effective and adept in exercising and communicating his/her capabilities. Relatedness is an individual's need to have interaction and connectedness to others, and autonomy is an individual's need to originate one's own actions and behaviors.

Deci and Ryan (2000) also argue that individuals' motivations are impacted by their level of internalization and integration of objects to themselves; this process is called internalization. The focus of internalization is conceptual in description and typically requires a rule, a value or a group (O'Donnell and Brown, 2012). Deci and Ryan (1985, 2000) describe the internalization process as a three-stage linear process consisting of introjection, identification, and assimilation/internalization. The introjection stage is the least effective in the internalization process. In this stage, individuals internalizes an object; however, they adhere to the regulations of the group to avoid guilt or anxiety, resulting in a sense of obligation to conform, even if not consistent with one's own values and beliefs.

Next, the identification stage occurs when an individual "reflect[s] a conscious valuing of a behavioral goal or regulation, such that the action is accepted or owned as personally important" (Deci and Ryan, 2000, p. 72). Finally, the assimilation/ internalization stage occurs when an individual identifies with an object and fully assimilates it with the self (e.g. integral part of one's identity). Ryan (1995) argues that this continuum is not necessarily linear in nature, but rather, an individual can internalize a new behavior at any point depending on both prior experiences and current situational factors. However, we argue that the internalization process is a linear process that best reflects an individual's experience within an OBC context. Prior research on SDT has focused on education (Katz and Cohen, 2014), sport and exercise (Gunnell and Gaudreau, 2015), health care (Choi *et al.*, 2014), relationships (Lynch, 2013), organizational behavior (Fernet, 2013), online consumer behavior (Przybylski, *et al.*, 2013), and finally, online gaming (Neys *et al.*, 2014). However, there has been scant research on SDT as a theoretical framework in an OBC setting.

O'Donnell and Brown (2012) provide initial theoretical guidance for the use of SDT as a framework. In their theoretical paper, they suggest that social influences and social comparison play an important role in community members internalizing the identity of a brand community leading to stronger brand community loyalty.

Thus, we use SDT in an OBC context, suggesting that individuals will move through the intrinsic motivation process, going from introjection to identification to internalization of OBC. We call this process the OBC motivation development (O'Donnell and Brown, 2012). We propose that individuals who are intrinsically motivated to be part of on OBC will move from the introjection stage to identification stage to internalization stage, which will result in identification with OBCs, and a strengthening of BW interactivity. Wu and Fang (2010) suggest that participation in OBCs results in a diverse set of group members contributing to the knowledge, structure, and identity of the brand community. Thus, BW interactivity in this context refers to reciprocal activities including information exchange or group meetings. Next, we discuss the construct in the proposed model.

Hypotheses
Consumer innovativeness
Consumer innovativeness suggests the extent to which consumers are both open to new ideas and driven to make autonomous decisions based, in part, on communications with others (e.g. Baumgartner and Steenkamp, 1996). Extensively studied, consumer

innovativeness has been (see Bartels and Reinders, 2011, for a review) found to play an important role in determining brand attitudes (Sanayei *et al.*, 2013), product awareness (Salinas and Pérez, 2009), and a willingness to participate in open web-based innovation projects (Füller *et al.*, 2008). It has also been born out that consumers with high levels of innovativeness are motivated to seek out various forms of OBCs (i.e. user generated content, blogs, discussion boards, etc.) during the pre-purchase stage of product consumption (Kim and Eastin, 2011).

SDT suggests that consumer innovators are autonomously motivated to seek out OBCs for novelty, and during the seeking process, they are likely to align their identity with the OBC. Consequently, it is likely that as they move through the OBC motivation development continuum, they will internalize the OBC resulting in increased BW interactivity. That is, higher (lower) consumer innovativeness should be more (less) motivated to identify with innovative brands they believe represent their own self-concept. Further, having stronger tendencies to associate favorite brands with self-concept should, in turn, cause higher (lower) consumer innovativeness to interact more (less) with OBCs. As such, we offer the following hypotheses:

H1a. The effect of consumer innovativeness on BW interactivity will be mediated by brand engagement in self-concept.

H1b. The effect of consumer innovativeness on BW interactivity will positively predict higher levels of BW interactivity.

Opinion leadership
Opinion leaders are consumers "who have the ability to trigger feedback, spark conversation within a community, or even shape the way that other members of a group 'talk' about a topic" (Huffaker, 2010, p. 594). Often opinion leaders tend to engage in online blogging (Segev *et al.*, 2012), eWOM (Chang *et al.*, 2013), web retailing (O'Cass and Carlson, 2012), content contribution (Teichmann *et al.*, 2015), and brand communities (McWilliam, 2012) in order to demonstrate self-confidence (Gnambs and Batinic, 2012). Further, opinion leaders are not wholly interested by novelty seeking, but rather are interested in providing information on topics in which they are interested. In an OBC context, Jadin *et al.* (2013) found that on Wikipedia, opinion leadership had a negative impact on knowledge sharing. They suggest that this is due to three factors: opinion leaders need to take an objective point of view, and typically opinion leaders are more subjective in their opinions'; opinion leaders lack of direct interaction with others may minimize their motivation to engage; and Wikipedia is where opinion leaders go to get information so that they can give knowledge to their social groups. Jadin *et al.*'s findings suggest that opinion leaders need to be engaged with active social communities where they feel motivated to give information.

SDT suggests that opinion leaders are more likely to engage in an OBC so that they can demonstrate their competency. This allows consumers to have a greater sense of self-worth (Deci and Ryan, 2000) and a stronger motivation to interact with brand community. That is, opinion leaders will identify with important brands that reflect and affirm their positions as opinion leaders, inducing them to continuously seek out new and different online mediums to demonstrate their competency. Thus, we believe that strong (weak) opinion leaders will be more (less) likely to self-identify with brands that allow them to demonstrate and disseminate product knowledge to opinion seekers. Having higher tendencies to associate favorite brands with self-concept and to provide pertinent information to community members should, in turn, cause consumers

to more strongly interact with brand communities. We therefore offer the following hypotheses:

H2a. The effect of opinion leadership on BW interactivity will be mediated by brand engagement in self-concept.

H2b. The effect of opinion leadership on BW interactivity will be mediated by purposive motives.

Susceptibility to normative influence
Susceptibility of normative influence is "the need to identify or enhance one's image with significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/ or the tendency to learn about products and services by observing others and/or seeking information from others" (Bearden *et al.*, 1989, p. 474). Consumers who are more susceptible to normative influence (higher susceptibility of normative influence) are likely to have strong interest in the potential value of a particular OBC that could reflect on their identity. These consumers are more sensitive to susceptibility of normative influence and thus are more likely to be extrinsically motivated to conform to group norms. OBCs generally have their own individual sets of group norms (Zhou, 2011) regarding brand interests and thus appear likely to attract those consumers with high susceptibility of normative influence. Tsai and Bagozzi (2014) and Zhou (2011) found that an individual's own subjective norm had no impact on participation, however, group norms played a significant role in OBC participation.

SDT suggests that belonging to an OBC motivates consumers to adhere to group norms in order to avoid guilt or anxiety (Deci and Ryan, 2000). This leads consumers to seek out information from, and identify with, OBCs with which they already identify. Further, the need to identify closely aligns with SNI, and thus results in belonging being a key attribute for the internalization process. Consequently, higher (lower) susceptibility of normative influence consumers are more (less) likely to identify with brands they believe others find desirable in defining their own self-concepts. They are also more likely to interact more (less) with brand websites in order to gain a sense of belonging, and higher (lower) susceptibility of normative influence consumers are more (less) motivated to seek out OBCs to learn about product information. It seems, that in tandem, having higher tendencies to associate favorite brands with self-concept while seeking external information about those products should lead consumers to more strongly interact with brand communities. As such, we suggest the following hypotheses:

H3a. The effect of susceptibility of normative influence on BW interactivity will be mediated by brand engagement in self-concept.

H3b. The effect of susceptibility of normative influence on BW interactivity will be mediated by purposive motive.

H3c. Susceptibility of normative influence will positively predict higher levels of BW interactivity.

Brand engagement in self-concept
Sprott *et al.* (2009) explored brand engagement in self-concept in several studies and found positive associations between brand engagement in self-concept and self-brand memory links, liking of the brand logo, and preferences for higher (vs lower) priced

products introduced by their favorite brand. Prior research suggests that BW interactivity is an antecedent to consumer-brand engagement (Hollebeek, 2011). Further, of direct relevance to this research, Pentina *et al.* (2013) find that higher brand engagement in self-concept consumers in the USA and Ukraine have stronger intentions to follow brands on Twitter. Overall, these results imply that, as consumers engage with brands, their self-concepts will "extend" and they desire higher levels of interactivity with their favorite brands and other brand users.

SDT suggests that, regardless of consumers' originating motives (autonomy, competency, or belonging), they will seek out brands that reflect their self-concept in an aim to strengthen their brand identity and thus move through the process of internalization and develop a stronger tendency to interact with brand websites. That is, higher (lower) brand engagement in self-concept will lead to a more (less) BW interactivity. Therefore we suggest the following hypothesis:

H4. Brand engagement in self-concept will positively predict higher levels of BW interactivity.

Purposive motives

As previously noted, research that investigated OBC has traditionally used general motivations of consumer engagement in OBCs (Dholakia *et al.*, 2004; Zaglia, 2013). For this study, we used Dholakia *et al.*'s (2004) framework to explore consumer motives. In their 2004 paper, they investigated individual motives to engage in large-group vs small-group online communities. They found that, in large communities, purposive motives predicted group norms and social identity. Their results suggest that consumers utilize communities to obtain and disseminate pertinent information, and in turn strengthen their identities. Since SDT suggests that consumers with the innate needs for competency and belonging will seek out mediums to get and give information as a means of identifying with OBCs, they are also more likely to move through the process of internalization and develop a higher level of BW interactivity. That is, having higher (lower) purposive motives should lead consumers to interact more (less) strongly with brand communities. We therefore suggest the following hypothesis:

H5. Strong purposive motivations will positively predict higher levels of BW interactivity.

Methodology
Data collection
The primary aim of this research is to develop a theoretical model that accounts for individual differences between consumers' brand-related connections and the strength of their BW interactivity using a SDT paradigm. Given the focus of the study, a national panel sample of young to middle age adults was deemed most appropriate. A reputable online survey firm was used to collect a national online panel. To be included in the analysis, the respondent needed to pass the attention screen and take more than five minutes and less than 20 minutes to complete the survey (Huang *et al.*, 2012). This resulted in 215 usable respondents. The sample's mean age was 35 (SD = 9.10). In all, 60 percent of the respondents were female (40 percent male) and the median income of the respondents was $55,000. In total, 33 percent of the respondents had some college, followed by 29 percent had a four-year degree, 20 percent had a high school diploma or less, 11 percent had a master's

degree or higher, and 7 percent had a two-year college degree. Finally, 75 percent of the respondents were white, followed by 9 percent African-American, 6 percent Hispanic, 4 percent Asian-American, and 3 percent responded other.

Measures
This study used several well-established scales that have been explored in other studies. Brand engagement in self-concept was measured using Sprott *et al.*'s (2009) eight-item scale. Purposive motives were measured using Dholakia *et al.*'s (2004) eight-item scale. Susceptibility of normative influence was measured using the eight-items from the normative dimension of Bearden *et al.*'s (1989) 12-item scale. Opinion leadership was measured using Gnambs and Batinic's (2011) nine-item scale. Consumer innovativeness was measured using Baumgartner and Steenkamp's (1996) ten-item scale. Brand website interactivity was adapted from Wu and Fang's (2010) six-item scale. Prior to responding to BESC, respondents were asked to think of their favorite brand(s), and then were ask to think of the same brand(s) when responding to BW interactivity.

Results
The dimensionality, reliability, and convergent and discriminant validity of the scales were examined using confirmatory factor analysis (Amos 18). Following Alden *et al.*'s (2013) method for item reduction, several items were removed to improve overall construct measurement properties. However, as shown in Table I, removal of these items did not appear to alter the latent construct measured as correlations between the initial scales and revised scales ranging from 0.99 to 0.83 (see Table AI for final items used and their descriptive statistics). Based on work of Fornell and Larcker (1981), there was no discriminant validity between the original construct and the reduced construct, and thus, little information was lost in the reduced constructs (Alden *et al.*, 2013). Further, all α coefficients were reassessed resulting in coefficients between 0.82 and 0.97. Finally, with the exception of brand engagement in self-concept, each of the revised constructs fit the data well, as none of their χ^2 statistics were significant ($p > 0.05$). Even though brand engagement in self-concept was at the 0.05 threshold, all other fit indices were acceptable (TLI = 0.99; CFI = 0.99; RMSEA = 0.06; SRMR = 0.01) and the construct was retained.

A six-factor measurement model was tested to investigate the structural model. Fit indices suggested that the measurement model exhibited a strong fit. Although the χ^2 fit statistic was significant (χ^2 (362) = 531.87, $p < 0.05$), given well-known inflation problems due to large sample size and model complexity, other fit indicators were examined and all of these were acceptable (CFI = 0.97; TLI = 0.97; RMSEA = 0.05; SRMR = 0.05). As can be seen in Table II, all factor loadings were significant and

Construct	Original no. of items	Final no. of items	Final χ^2 statistic	Prob.	Correlation w/initial scale
BESC	8	6	16.84	0.05	0.99
SNI	9	6	19.87	0.13	0.99
CI	10	3	0.38	0.59	0.83
OL	9	5	12.48	0.19	0.97
Purposive	8	4	3.50	0.17	0.93
BW interact	6	5	4.27	0.51	0.99

Table I.
Construct items and goodness of fit

exceeded 0.70. Next, the constructs' convergent and discriminant validity were assessed by computing their composite reliabilities and average variance extracted (AVE) scores (Fornell and Larcker, 1981). All of the composite reliabilities exceeded 0.70, ranging from 0.97 to 0.82, indicating internal consistency. All constructs also demonstrated convergent validity as their AVE scores were 0.50 or greater (Fornell and Larcker 1981). Finally, all squared correlations between construct pairs were less than the smallest AVE score, suggesting each of the constructs exhibited discriminant validity (Fornell and Larcker, 1981).

Common method bias was investigated using the single unmeasured latent method factor approach following Podsakoff *et al.* (2003). The addition of the method factor did not have a significant impact on the factor path loadings and all of the loadings for the structural model factors remained significant ($p < 0.001$). These results suggest minimal common method bias, which did not significantly impact the model's estimation.

Testing alternative models

As a further test of proposed model validity, two theory-based competing models were specified. The first model posits that all the variables in the hypothesized model could have a direct path to BW interactivity. The overall fit improved ($\lambda^2(361) = 519.12$, $p < 0.005$; TLI $= 0.97$; CFI $= 0.97$; SMSR $= 0.05$; RMSEA $= 0.05$) for the competing model vs the hypothesized model ($\Delta\chi^2 = 24.04$; $p < 0.00$), however, opinion leaderships' paths were non-significant ($\beta = 0.07$; $p = 0.253$). A second competing model was explored that posited brand engagement in self-concept and purposive motives partially mediated consumer innovativeness and opinion leadership. Thus, a direct path between consumer innovativeness to purposive motives and a direct path between consumer innovativeness to BW interactivity, as well as a direct path between opinion leadership to BW interactivity were explored. The overall fit was improved ($\lambda^2(336) = 528.04$, $p < 0.005$; TLI $= 0.96$; CFI $= 0.97$; SMSR $= 0.05$; RMSEA $= 0.05$) for the competing model vs the hypothesized model ($\Delta\chi^2 = 15.04$; $p > 0.01$). As noted, the direct path from opinion leadership to BW interactivity was non-significant, as well as the direct path from consumer innovativeness to purposive motives ($\beta = -0.10$; $p = 0.166$). Though both competing models were better fitting, they had insignificant paths. Taken together, these results suggest that the use of the proposed framework is more parsimonious and thus appropriate.

Testing hypothesized paths

The proposed model was estimated resulting in $\lambda^2(365) = 543.08$, $p < 0.005$. However, all other goodness of fit indices were acceptable (e.g. TLI $= 0.96$; CFI $= 0.97$; SMSR $= 0.05$;

Constructs	α	1	2	3	4	5	6
1. BESC	0.97	0.81					
2. CI	0.82	0.35*	0.59				
3. SNI	0.95	0.55*	0.28*	0.80			
4. OL	0.86	0.39*	0.24*	0.20*	0.61		
5. Purposive	0.94	0.39*	0.08	0.31*	0.51*	0.68	
6. BW interact	0.97	0.51*	0.10	0.54*	0.30*	0.49*	0.86

Table II.
Correlations, AVE and reliabilities

Notes: Average variance extracted (AVE) measures are included along the diagonal. Correlations is significant at *$p < 0.05$

RMSEA = 0.05) and as a result, hypotheses were tested by examining the standardized structural path coefficients within the model. Further, the mediation effects were explored using the recommendations of Zhao *et al.* (2010) who provide guidelines for mediation testing using the Preacher and Hayes' (2008) bootstrapping method (see Zhao *et al.* for full discussion of the recommended mediation test).

As seen in Table III, all but one hypothesis were supported. As proposed in *H1a*, the effect of consumer innovativeness on BW interactivity was mediated by brand engagement in self-concept. The direct path from consumer innovativeness to brand engagement in self-concept and BW interactivity was significant ($\beta = 0.17$; $p < 0.01$; $\beta = -0.13$; $p < 0.05$), while the total indirect path of consumer innovativeness to BW interactivity was $\beta = 0.04$. This result suggests competing path mediation; however, the negative path consumer innovativeness to BW interactivity was unexpected. Thus, there is support for *H1a*, but not *H1b*. *H2a-H2b* proposed that the effect of opinion leadership on BW interactivity was mediated by brand engagement in self-concept and purposive motives. The direct path opinion leadership to brand engagement in self-concept and purposive motive were significant ($\beta = 0.26$; $p < 0.001$; $\beta = 0.34$; $p < 0.001$, respectively). The results suggest indirect-only mediation through brand engagement in self-concept ($\beta = 0.06$) and purposive motives ($\beta = 0.11$) with total indirect effect on BW interactivity of $\beta = 0.17$, thus suggesting support for *H2a-H2b*.

H3a-H3b proposed that the effect of susceptibility to normative influence on BW interactivity would be mediated by brand engagement in self-concept and purposive motives. Further, *H3c* proposed a direct path susceptibility of normative influence to BW interactivity. The direct paths of susceptibility to normative influence to brand engagement in self-concept, purposive motives and BW interactivity were significant ($\beta = 0.49$; $p < 0.001$; $\beta = 0.29$; $p < 0.001$; $\beta = 0.38$; $p < 0.001$, respectively). The results also suggest a complementary mediation through brand engagement in self-concept ($\beta = 0.11$) and purposive motives ($\beta = 0.08$) with total indirect effect on BW interactivity of $\beta = 0.19$, thus suggesting support for *H3a-H3c*. Finally, as hypothesized (*H4*), brand engagement in self-concept positively predicted higher levels of BW interactivity ($\beta = 0.23$; $p < 0.01$), as well as purposive motives (*H5*) positively predicted higher levels of BW interactivity ($\beta = 0.33$; $p < 0.001$) (Figure 2).

Discussion and implications
The primary aim of this paper was to demonstrate how SDT can be utilized to understand the impact of brand-related antecedents on BW interactivity in a

Hypothesized relationship	*B*	Mediation (95% CI)[a]	Mediation type	Hypotheses	
CI → BESC	0.17**	0.1080-0.2859	Competing	*H1a*	Supported
CI → BW interact	−0.13*	–		*H1b*	No Support
OL → BESC	0.26***	0.2604-0.5920	Indirect only	*H2a*	Supported
OL → Purposive	0.34***	0.2125-0.5349	Indirect only	*H2b*	Supported
SNI → BESC	0.49***	0.0978-0.3195	Complementary	*H3a*	Supported
SNI → Purposive	0.29***	0.0748-0.2081	Complementary	*H3b*	Supported
SNI → BW interact	0.38***	–		*H3c*	Supported
BESC → BW interact	0.23**	–		*H4*	Supported
Purposive → BW interact	0.33***	–		*H5*	Supported

Notes: [a]If confidence intervals have a 0 than there is no mediation effect. *$p > 0.05$; **$p < 0.01$; ***$p < 0.001$

Table III.
Path coefficients
and hypotheses

nomological net. We find that the proposed OBC motivational development continuum framework provides initial support for consumers increased motivations for BW interactivity through the internalization process. Further, by studying several brand-related antecedents of BW interactivity, and making and elaborating on the distinction between brand engagement in self-concept and purposive motives, our model suggests ways to concretize information gathered from OBCs in order to improve brand communications and branding practices at large. In this research, we examined four brand-related antecedents and mediators (brand engagement in self-concept, susceptibility of normative influence, opinion leadership, and consumer innovativeness) and found evidence of the differing roles that brand engagement in self-concept and purposive motives play as mediators. One unexpected finding was that consumer innovativeness negatively predicts BW interactivity. A *post hoc* analysis was run to investigate consumer innovativeness to BW interactivity path without any other variables in the model. The results found that the path was positive ($\beta = 0.11$; ns); though non-significant, the sign was flipped from the full model. This suggests that the strength of the mediator had a significant suppression effect on consumer innovativeness and that brand engagement in self-concept plays an integral role in mediating consumer innovators' BW interactivity. In addition, purposive motives also play an important role as a mediator of consumers who are high in susceptibility of normative influence and opinion leadership. Finally, as predicted, higher levels of brand engagement in self-concept and purposive motives lead to more frequent brand website interactivity.

We proposed SDT (Deci and Ryan, 1985, 2000) as a macro-theory to explain consumers' motivations to interact with OBCs; prior literature used social identity theory and the uses and gratification paradigm as theoretical frameworks (i.e. Algesheimer *et al.*, 2005). Though these two theories are significant, it is our view that they only help explain certain types of relationships within a larger nomological net. For example, the susceptibility to normative influence to brand engagement in self-concept relationship reflects social identity theory, whereas the opinion leader to purposive motives relationship reflects the uses and gratification paradigm. The OBC motivational development continuum, however, seems to be a more comprehensive theoretical framework for explaining consumers' psychological processes as they engage with, and internalize, brand communities into their identities. Further, the research presented here utilized three brand-related antecedents to represent Deci and Ryan's (2000) innate needs (opinion leadership = competency; consumer innovativeness = autonomy; susceptibility of normative influence = belonging) and
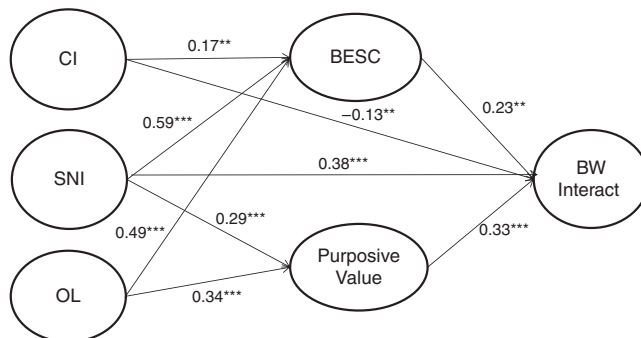
Figure 2.
SEM analysis of
model predicting
BW interactivity

based on the work of O'Donnell and Brown (2012), extends the literature by quantitatively testing the motivational development continuum within a theoretical framework. Further, this research quantitatively supports the work of Voorveld *et al.* (2010) who qualitatively explored the level of website interactivity of 50 global brands. Next, we discuss how this study is able to advance managerial practices in three significant ways.

Managerial implications
First, the proposed model offers marketing managers the opportunity to develop specific strategies based on psychological brand-related constructs and to direct those toward specific individual consumer segments. As we enter the era of one-to-one marketing and big data, consumer online participation in OBCs will become increasingly more important in terms of providing useful metrics and enhancing brand value. For example, 37 percent of brands have a cohesive OBC strategy, 55 percent of brands conducted social experimentation (trying different social websites with no obvious cohesive strategy), 7 percent of brands have little to no activity, and 1 percent of brands are overly active, leading to OBC cannibalization (ComBlue, 2012). This suggests an overall difficulty in understanding the brand community and potentially can lead to the enactment of ineffective branding strategies. There are several organizations like Pepsi (2.5 million Twitter followers), Nike (22 million Facebook followers), and Coach (504,000 Instagram followers) that have a strong strategic position with their OBC. Though larger well-established brands are tackling OBCs with vigor, many other brands are still swimming through the OBC swamp. Thus, by utilizing the OBC motivational development continuum, marketing managers can gain a deeper understanding of how to increase BW interactivity by targeting specific consumer needs and gain a better understanding how to strategically develop a process for moving an OBC member from the introjection phase to the internalization phase. For example, high susceptibility to normative influence and opinion leaders are ideal segments for driving BW interactivity. Consequently, by developing targeted communication strategies that prime these brand behaviors, marketing managers can strengthen community members identity-brand congruence thereby increasing the strength of consumers' brand identity and overall community engagement.

Second, marketing managers should be excited by the role that brand engagement in self-concept plays in the overall model. The model suggests that consumers high in susceptibility to normative influence and opinion leadership strongly seek out brands that represent their self-concept. Psychologically, marketing managers need to ensure that the brand community websites, whether corporate sponsored or consumer sponsored, have relevant and meaningful content that targets high brand engagement in self-concept individuals. For example, as of May 2014, 52 percent of consumers prefer to go directly to a brand website for content, and 40 percent believe that there are negative consequences for not providing timely and meaningful content (www.marketingcharts.com accessed November 2014). Further by encouraging high opinion leaders to be active on a brand website, marketing managers can drive consumers high in susceptibility to normative influence to more strongly identify with the brand community. Social Mention, an online platform that tracks and measures what people are saying about your brand in real time, allows for brands (e.g. Nike or Apple) to identify key brand influencers in the social media environment. In turn, this provides a tool to target specific individuals, and develop targeted communications.

Finally, marketing managers can use co-creation of OBCs as a marketing tactic to strengthen the community's BW interactivity. By developing strategies that build community cohesiveness, learning, sharing, and socializing through co-developing, marketing managers can generate higher levels of OBC participation (Brodie *et al.*, 2011; Healy and McDonagh, 2013; Zaglia, 2013). Consequently, the model provides managers with the means to gage co-creation practices with their consumers by assessing their levels of BW interactivity. A good example of this is the Doritos© customer Super Bowl ad contest. The company incentivized its OBC members to co-create an ad and then featured the winning ad during Super Bowl XLVIII. In so doing, Doritos© helped solidify bonds with their most active and influential customers.

Limitations and future research
Although this research addresses important theoretical and empirical issues connected to brand-related antecedents and mediators of OBC BW interactivity, there are some places that may be enhanced with further research. First, this research investigated all consumers who engage in OBCs. However, related research has found that only 1 percent of community members are high OBC users, whereas 90 percent are termed "lurkers" (Morrison *et al.*, 2013). To gain a more nuanced understanding of OBCs, it could be useful to investigate both groups separately. Such studies could provide insight into specific brand motivations for OBC engagement and illuminate differences between individual consumer segments. For example, are high OBC users more inclined to engage with communities if they are seen as opinion leaders, or are these individuals more like high consumer innovators? Are lurkers solely engaging in brand communities to fulfill their need to belong? Are there key brand engagement differences between the two groups? Finally, are there circumstances which drive lurkers to become more active?

Second, the sample did not include consumers from culturally and economically diverse countries as it focused only on young to middle aged adults. As technology continues to spread to economically depressed countries, it is important to identify future emerging types and characteristics of OBCs as well as to consider the platforms that will optimize those interactions. For example, will consumers outside of economically advantaged countries continue the practice of interacting online with symbolic, experiential OBCs or will they expand their interactions to more functional, everyday brands? Given the growing size and importance of urban markets such as São Paulo, Prague, and Budapest, extending the model to rapidly growing, yet relatively understudied nations, would be beneficial. Additionally, this study OBCs using young to middle aged adults, thus additional research should test the generalizability of the model with a more representative sample.

This study only explored purposive motives, but the findings in Dholakia *et al.* (2004) support using self-discovery, maintaining interpersonal interconnectivity and social enhancement in future investigations that seek to determine ways that culture (Sharma, 2011) and motives interact to moderate relationships between BESC as an endogenous mediator of OBC identification and interaction. Additionally, recent theoretical work by Sheth and Solomon (2014), suggests that there is a need to explore the extended self in a digital environment. Finally, in the current study, a limited number of antecedents were tested. Other individual difference factors such as opinion seekers (Flynn *et al.*, 1996), materialism (Richins 2004), and psychological sense of brand communities (Carlson *et al.*, 2008), as well as, age, ethnicity and gender, may play important roles and should be tested in the future.

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Appendix

	M (SD)
Brand engagement in self-concept	
I consider my favorite brands to be a part of myself	3.62 (1.77)
I often feel a personal connection between my brands and me	3.59 (1.73)
Part of me is defined by important brands in my life	3.27 (1.69)
I feel as if I have a close personal connection with the brands I most prefer	3.70 (1.83)
There are links between the brands that I prefer and how I view myself	3.60 (1.70)
My favorite brands are an important indication of who I am	3.51 (1.83)
Susceptibility of normative influence	
It is important that others like the products and brands I buy	2.60 (1.67)
When buying products, I generally purchase those brands that I think my friends and family will approve	2.64 (1.77)
If other people can see me using a product, I often purchase the brand they expect me to buy	2.58 (1.64)
I achieve a sense of belonging by purchasing the same products and brands that others purchase	2.62 (1.66)
If I want to be like someone, I often try to buy the same brands that they buy	2.42 (1.60)
I often identify with other people by purchasing the same products and brands they purchase	2.72 (1.70)
Consumer innovativeness	
I would rather stick with a brand I usually buy than try something I am not very sure of (R)	4.24 (1.62)
I am very cautious in trying new or different products (R)	3.88 (1.66)
I rarely buy brands if I am uncertain about how they will perform (R)	4.10 (1.61)
Opinion leadership	
Friends and acquaintances often discuss subjects that I brought up	3.33 (0.97)
I usually succeed if I want to convince someone about something	3.44 (0.97)
It is easy for me to influence other people	3.24 (1.00)
I have the impression that I am regarded by my friends and acquaintances as a good source for tips and advice	3.55 (0.95)
I often use my persuasive powers during discussions to reach agreements quickly	3.25 (1.00)
Purposive motives	
To get information	4.73 (1.93)
To learn how to do things	3.95 (1.99)
To solve problems	3.56 (1.95)
To make decisions	3.69 (1.95)
BW interactivity	
I spend significant time communicating online with the company and/or brand community members on one or more site	2.56 (1.83)
I can concentrate on certain topics and put them into online discussion with the company or/and brand community	2.93 (2.00)
Online discussion on one or more brand community sites that I go to include diverse topics	2.96 (2.00)
Many people join our online discussion whenever we go through certain topics related to the brand and/or company	2.73 (1.92)
I convers online with the company and/or brand community members in many ways (such as e-mails, web forums, Twitter	2.82 (1.98)

Table AI.
Means and
standard deviations

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