Drivers and Outcomes of Brand Relationship Quality in the Context of Online Social Networks

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ABSTRACT: This research adopts a brand relationship perspective to investigate how users of a social network site (e.g., Facebook and Twitter) perceive the quality of their relationship with those sites and their intention to continue to use them, as well as the intention to continue using the hosted brands that they "follow" through the social network site. In addition, the role of matching a user's personality to the perceived personality of the social network site is explored as an antecedent to perceived relationship quality with the social network site. Survey responses from 284 Twitter and Facebook users were collected, and Smart PLS path modeling was used to test our hypotheses. Findings confirm that individuals join and form stronger ties with social networks that convey similar personality characteristics to themselves. Study findings also reveal that perceived strength of relationship quality with an online network brand not only facilitates future intentions to continue using this network and recommend it to others but also strengthens preferences for other brands utilizing this network for marketing purposes. A key implication of our findings is that social network sites and "followed" businesses may benefit from designing and implementing relationship-building-focused processes to strengthen participation in the social network site to increase user engagement with brands hosted on the social network site.

KEY WORDS AND PHRASES: Brand relationship quality, Facebook, self-brand personality match, social networks, Twitter, use continuance.

Social media comprise the fastest-growing marketing channel in the world [20]. Forrester Research [55] predicts that expenditures on social media marketing in the United States will grow 34 percent annually and reach $3.1 billion in 2014. Although calculating social media marketing's return on investment remains a challenge, growing evidence supports its effectiveness. According to survey reports, 67 percent of Twitter users who become followers of a brand buy that brand's products, and 60 percent of Facebook users who become a fan of a brand are more likely to recommend that brand to a friend [42]. In addition, 74 percent of consumers report being influenced by the input from fellow social media participants in their buying decisions [10]. The emergent social media structures include blogs, wikis, and social networks that vary in technical features while uniformly supporting "public displays of connections" and offering exponential spread of content along with its unprecedented accessibility [9]. Such modern-day modes of connecting marketers with consumers (and consumers with consumers) present opportunities for researchers to explore how social networking can influence marketing efforts.

Customer participation in and loyalty to social media sites is important to marketers who make decisions to allocate expenditures to online communications. Previous research has employed various perspectives in addressing this issue. In particular, several studies [56, 66] explored uses and gratifications

sought and obtained through social media participation. Others applied the theory of planned behavior [59], the technology acceptance model [65], and the satisfaction-based loyalty paradigm [35] in explaining social media continuance motivations. However, at a time of rapid proliferation of social media with easily imitable functionality and low barriers to entry, functionality-based loyalty motivations do not sufficiently explain user continuance behaviors. Marketing theory suggests that when function-based attributes and benefits can no longer confer a competitive advantage, emotional, relational, and experiential appeal may be more effective in increasing user loyalty [6]. For example, in the e-commerce context, relationship with and trust in the e-commerce platform has been shown to boost user confidence with the platform itself as well as the products marketed through the e-commerce platform [7, 12, 46].

This research adopts the brand relationship theory perspective, which maintains that by acting as identity-expressing symbols, brands acquire stereotypical images and identities (i.e., personalities) in the consumer's mind, which helps position those brands as social relationship partners [30]. Perceived strength and quality of these relationships determine a customer's intention to continue using current brands and may spill over to other closely associated brands (e.g., as in brand alliances). The separate roles of brand personalities and brand relationships in facilitating access to existing customers, customer retention and loyalty, and future sales have been empirically studied in various contexts (e.g., [43, 47, 75]), but their combined influence has not been assessed in the context of marketing and e-commerce using social media.

The current study addresses these gaps in the literature and focuses on social network sites (SNSs), defined as Web-based services that allow users to connect, share, and contribute to the collective creation of content (text, photos, videos, etc.) that is visible to all. Two of the most common SNSs today are Facebook and the microblogging site Twitter. As "relationship platforms," these social media sites may exhibit more prominent brand personalities formed through associations with the personalities of their users. These SNSs may also facilitate stronger effects of brand relationships on user continuance intentions [47] and could potentially transfer these effects to other product brands that are marketed or advertised (i.e., hosted) on the SNS platforms [7, 22]. In particular, we focus on the role of personality match between the user and the SNS in strengthening their brand relationship quality, or BRQ (composed of perceived brand-related love, trust, interdependence, commitment, intimacy, and partner quality) [30]. We further investigate the role of BRQ in fostering SNS continuance intentions and patronage intentions toward the hosted brands "followed" by SNS users. A hosted brand might be, for example, Ford, GM, or Honda, which would use an SNS such as Facebook or Twitter to communicate with automobile consumers ("followers") directly as well as indirectly through other SNS users [36].

This study contributes to the existing literature by applying the brand relationship perspective to the context of social networks. More specifically, this study proposes and tests a combined causal framework that brings together the concept of personality match between the users and the SNS to form the BRQ with the SNS. BRQ is then used to explain behavioral intentions of social network users toward both the focal SNS and other brands hosted through

the SNS (e.g., followed and "friended" by its users). In the remainder of the paper, we develop hypotheses based on the review of existing literature, explain data collection procedures and analysis methods, and present and discuss the results. Subsequently, we recommend future research directions and suggest managerial implications of the findings.

Theoretical Development and Hypotheses

The overarching theory used to develop this research can be traced to the seminal work of Fournier [30], who underscored the need to transition from the concept of brand loyalty as a major managerial goal to studying the process of relationship formation between consumers and their brands. As opposed to loyalty, increasingly operationalized as "sequence or proportion of purchase" [30, p. 343], brand relationship concept reflects consumer willingness to anthropomorphize brands and assign them select human properties, legitimizing the possibility of social reciprocity and interaction with brands. The brand relationship theory stems from theories of symbolic consumption [82] and social identity [78] that underscore the role of possessing and consuming products in constructing one's social identity and communicating it to others. Extensive research has supported the existence of brand personalities, defined as sets of human traits perceived to characterize various brands. Such traits as agreeableness, extraversion, sophistication, ruggedness, excitement, and so forth have been identified for various brands and linked to consumer behavioral outcomes [77]. Existing research also supports the role of strong self-brand relationships in satisfaction levels, perceptions of brand quality, and reactions to service failures in the contexts of fashion, packaged goods, and retail store patronage, among others [2, 74]. This study brings together the concepts of BRQ and brand personality in an attempt to propose a combined causal framework explaining behavioral intentions of social network users toward both the focal SNS and other brands hosted via the social network platform and followed (i.e., "friended") by its users.

Brand Relationship Quality

Brand relationship quality (BRQ) is a customer-based indicator of the strength and depth of the relationship between the consumer and the brand [75]. The BRQ construct reflects a broad spectrum of factors that contribute to stable and durable consumer–brand relationships [41], such as affective grounding (love and passion), self-connection (identity expression), trust, interdependence, commitment, intimacy, and partner quality [30]. In the context of human relationships, these factors play a role in such relationship outcomes as accommodation, forgiveness, and devaluation of alternatives. A number of empirical findings support the role of BRQ in increasing repurchase intentions [41], reluctance to switch brands, willingness to share personal information with the company [75] and word-of-mouth behaviors [37]. It is also instrumental in influencing such managerially essential outcomes as future

brand use, likelihood of switching brands, willingness to share information with the company, and openness to brand contact [75]. The importance of BRQ for reducing marketing costs, facilitating access to existing customers, positively affecting future sales, improving customer retention and loyalty, and influencing social commerce participation intentions has been empirically determined in other contexts (e.g., [7, 43, 75]). However, no research to date has considered the issue of BRQ within the context of SNS. Since three-quarters of global online consumers spend 22 percent of their online time on SNS and on average are connected to 130 other network participants [52, 62], understanding the impact of their relationships with these sites on future networking behaviors and attitudes toward social media advertising is imperative for marketing/e-commerce researchers and practitioners.

The role of BRQ within the context of SNS appears especially interesting for testing the predictions of the brand relationship theory due to the unprecedented pace of technological developments. Such developments are leading to a rapid commoditization of technology-based innovations, making brand-based differentiation a major competitive advantage. The formation of relationships between users and an SNS may be more intense and meaningful compared to other relationships since social network platforms readily facilitate human interpersonal relationships between their users. User interactions of this nature may reflect on the distinct personality of the SNS. Thus, strong (higher quality) brand relationships may provide an explanation of SNS membership "stickiness" and popularity.

Existing studies on SNS participation [66] mainly utilize the uses and gratifications theory to arrive at motivations of SNS users [56]. The theory of planned behavior [59] and the technology acceptance model [65] are also adopted as means to investigate participation and loyalty of SNS users. Other studies utilize a utility-based approach, suggesting perceived value, satisfaction, and consumer knowledge of alternatives [35], as well as habit [5], as antecedents to SNS continuance intentions. They indicate that different functionalities of social networks determine their uses and members' gratifications. A limited number of findings apply marketing relationship theory and consider the role of commitment and trust as antecedents to Web site "stickiness" and participation in social commerce [7, 46, 47, 48]. However, with high information transparency and low barriers to entry in the social media industry, there has been a proliferation of new SNSs. This provides an opportunity for research to shed light on the notion of higher relationship quality of a brand with an SNS as a competitive advantage.

SNSs as platforms for interpersonal relationships among users satisfy a major relational criterion identified in the personality and social psychology research [30]. In the online user group context, studies reveal that relational links between users tend to form over time through information exchange, collaboration, and idea sharing [16]. These relationships are characterized by dynamic developments (i.e., evolution) and incremental benefits obtained through working together (i.e., multiplicity). As such, SNSs symbolize collective relational developments among their users and can represent legitimate relationship partners from the point of view of relationship marketing theory. Thus, it is reasonable to propose that stronger BRQ with a SNS will positively

affect both the continued loyalty to and use of the site. Our first hypothesis summarizes this relationship:

> **Hypothesis 1:** *Strong BRQ with the SNS will positively affect behavioral intentions.*

Self-SNS Personality Match

Another central concept within the brand relationship paradigm is that of brand personality [2]. Research on consumer relationships with brands has shown increasing anthropomorphizing of brands and their perception as social entities by consumers as a result of learning about and experiencing a brand. The entire marketing communications mix (advertising, symbols and logos, spokespersons, packaging, etc.) and every exposure to a brand creates brand personality over time [1]. Brand personality is beneficial to both marketers (by creating a distinct image and differentiation in consumers' mind) and consumers (by providing symbolic self-expressive benefits). Numerous studies confirm that brand personalities not only assist in brand differentiation but also have an effect on perceived quality [67], brand equity [80], and establishing consumer–brand relationship bonds [2]. A well-established brand personality can heighten emotional ties with the brand and increase preference, patronage, trust, and loyalty [71].

Congruity and self-concept theorists [72, 73] argue that consumers who perceive a brand's personality to be consistent with their self-concept would be motivated to consume the brand. This proposition is based on the similarity-attraction paradigm in social psychology, which predicts that perceived similarity contributes to attraction among individuals [11] and that partner similarity improves the quality of a relationship [4]. Similarly, social identity theory states that similar attitudes and personality traits invoke cultural stereotypes and lead to the individual's deriving a positive social identity from associating with desirable in-groups [78]. Brand research supports these suppositions by findings of positive relationships between self-brand personality match (congruity) and brand preference, brand choice, purchase intentions, usage, and loyalty (e.g., [72, 73]). In addition, self-brand congruity significantly affects BRQ, which in turn contributes to predictive variance in brand loyalty [43].

In the online context, brands represent instances of socially constructed identities, created by both marketers and consumers [51] and reflecting characteristics associated with the typical user, as well as with advertising images and associations [63]. Several studies have attempted to describe online brand personalities [54], e-brand personalities [57], and Web site personalities [13] using both preexisting personality scales and lists of adjectives derived from qualitative research. These studies mainly focus on mechanisms of creating different personality dimensions using various Web design and interactive tools. To our knowledge, no research to date has introduced an SNS personality construct or investigated the role of personality match between an SNS and its members. The current study addresses this gap.

For the purposes of this study, we define brand personality of an SNS as a combination of human personality traits associated with a particular SNS [1]. By facilitating human interactions, SNSs possess the important relational attribute of reciprocity [30], which renders them the legitimacy of social agents and humanlike identities. Earlier research has shown that symbolic meaning of brands reflects attributes associated with groups using the brand and is used to help enhance self-concept through brand adoption [49]. Therefore, an SNS should reflect attributes generally ascribed to its members, as well as the online activities they engage in, and therefore would be attractive to those individuals who associate themselves with this in-group. By joining a particular SNS, its members may perceive the site as part of their self-concept and may use it to reinforce their identity. Therefore, perceived self-SNS personality match should have an effect on the evaluation of BRQ with the site. Our second hypothesis describes this relationship:

> **Hypothesis 2:** *Perceived personality match between the user (self) and the SNS will be positively related to BRQ with the SNS.*

Behavioral Intentions Toward Hosted Brands

The phenomenon of "transference," originating from social psychology [3, 14], denotes a pattern of carrying over the effects of past relationships into future relationships, based on the activation of a cognitive schema triggered by a relevant stimulus. Transference has been found to operate in personal relationships when a prior evaluation of—or an affect toward—a significant other influences the future assessment and feelings toward that significant other [3]. The explanation of this phenomenon lies in the information-processing models of social judgment, whereby people draw upon preexisting knowledge when attempting to understand others [27] and in the affective stereotyping [26] characterizing social cognition. In marketing and advertising, numerous studies have documented the transfer of celebrity qualities (trustworthiness, attractiveness, expertise, etc.) and demographics (e.g., sex) to the products advertised [21, 44], as well as the transfer of attitudes toward celebrities to brand attitudes [53, 79], that is, a positive attitude toward a celebrity brand endorser will lead to a positive attitude toward the brand. Moreover, in sponsorship and cobranding literatures, symbiotic relationships have been observed with "transference of inherent values" from sponsored activities to sponsors and from one brand to another, constructing cobranded identities [50]. Other empirical findings have shown that affective commitment to a brand "spills over" to complementary brands [69], brand allies [69], and from offline to online retail brands [45]. In the context of online travel, associating new travel agency brands with well-known brands has been shown to increase consumer trust of the unknown brand and intention to purchase [22]. Finally, "sensation transference" has been described when feelings about the packaging of a product were transferred to and combined with feelings about the actual product [31]. These findings suggest that an SNS user's perceptions about the quality and strength of the SNS relationship can transfer to other brands that

the user follows (i.e., "friends") on the platform and can influence behavioral intentions toward other followed brands.

The notion that BRQ spills over onto other SNS-hosted brands that are followed ("friended") by users can also be considered from the perspectives of Heider's [38] cognitive balance theory and Festinger's [25] theory of cognitive dissonance. According to the balance theory, SNS members will strive for harmony/balance in their attitudes toward SNS and other brands they follow on the platform. This means that those who perceive high-quality relationships with the SNS will transfer this perception to the brands they interact with (follow or "friend") on the platform. Similarly, the theory of cognitive dissonance would predict that those who experience a dissonance in their perceptions of SNS and the hosted brands followed on the platform will be motivated to either abandon the SNS platform or disassociate themselves from negatively perceived brands by not "friending" or following them on the SNS. Thus, due to these cognitive and social processes, perceived BRQ with the SNS is expected to transfer to other SNS-hosted brands that are followed or "friended" by users on the platform. All this has been confirmed via recent independent studies (see www.chadwickmartinbailey.com) that find that 51 percent of Facebook fans and 67 percent of Twitter followers say they are more likely to buy and 60 percent of Facebook fans and 79 percent of Twitter users are more likely to recommend brands hosted by these SNS platforms. Our third hypothesis describes this relationship:

> *Hypothesis 3: BRQ with the SNS will positively affect behavioral intentions toward hosted brands that the user follows ("friends") on the SNS.*

Brand Engagement in Self-Concept

To accurately assess the effect of associating the hosted brands followed or "friended" on the SNS, customer preexisting engagement with the followed brands should be taken into account. The concept of brand engagement stems from the symbolic interactionism perspective [49]. This view suggests that individuals assign meaning to objects, events, and behaviors based on interpretations that vary according to how they see themselves as compared to other people's appraisals of them. This is relevant to our study in that prior exposure to an SNS-hosted brand, either directly or indirectly, can influence how one views that brand. Direct exposure allows an individual to assess the hosted brand, and knowledge that others are using the brand (i.e., indirect exposure) may influence the direct assessment. Brand engagement in self-concept (BESC) reflects a consumer's general tendency to include certain brands in their self-concept and as such is a good measure of preexisting connections with the hosted brands followed or "friended" on the SNS platform. The predictive validity of the BESC construct was supported by findings that it leads to greater consumer awareness and recall of brands perceived as part of self-concept, as well as to better attention to brand stimuli in the environment and higher preference for and loyalty to them [76]. Therefore, incorporating BESC as a control variable will allow us to partial out the variance in behavioral

intentions toward the hosted brands and to correctly assess the existence of the SNS-BRQ spillover effect on these brands.

Method

Sample and Procedure

We obtained data from two versions of an online survey adapted for Facebook and Twitter user participants. Selection of these two SNSs reflects their impressive growth rates and popularity and allows for post hoc comparison of the results. In particular, we anticipated different personality dimensions to be salient in contributing to perceived personality match for these two SNSs. Facebook is the most popular SNS brand in the world, with 54 percent of the world's Internet population visiting the site and a 20 percent share of the U.S. online advertising market [52]. Its impressive membership numbers (more than 500 million people spending over 700 billion minutes on the site every month) offer a great potential for targeted and social advertising [62]. Traditionally, the site has connected preexisting networks of offline friends and acquaintances, and it requires reciprocal permissions for joining personal networks. Twitter, on the other hand, attracts only 19 percent of U.S. adult social media participants (compared with 73 percent with a Facebook profile) [61]. Twitter allows for users to "follow" without permission, to form networks between strangers based on interests, and to broadcast short messages to the whole community as opposed to sharing comments only with friends. In addition, notable demographic dissimilarities between Facebook and Twitter users [32] may imply motivational, behavioral, and psychological distinctions in their memberships. Differences in user characteristics may explain their intentions not only toward using a particular SNS but also toward other hosted brands present on the site. Finally, as a niche microblogging network, Twitter may project a unique brand personality that appeals only to certain types of users, while broad Facebook adoption may not be conducive to conveying a unique brand identity. Recent research findings indicate that almost 19 percent of tweets mentioned a business or hosted brand in one way or another [7].

Two Twitter and Facebook members with over 14,000 network connections distributed the online survey links to their friends and followers with a request to fill it out and then forward to their networks. As a result of utilizing this snowball technique, appropriate for the initial stage of research, we collected 284 completed responses. As anticipated, demographics of the respondents differed somewhat between the two networks. Twitter users in our sample ($n = 84$) are significantly older than Facebook ($n = 200$) users ($t = 9.47, p < 0.01$), have higher levels of education ($\chi^2 = 158.83, p < 0.01$), and have more female respondents ($\chi^2 = 4.58, p = 0.03$). These demographics reflect the profile of Twitter members, with the average age of over 35, 53 percent of whom are female, and with household incomes of over $60,000 [15]. They also correspond to the Facebook Demographics and Statistics Reports citing 30.9 percent of users as being between the ages of 18 and 24 [19]. To further analyze potential differences between the subsamples, we compared the respondents' motiva-

tions for joining each SNS. The results supported significant differences: the leading motivation for joining Twitter was "to get and provide others with information" (mean = 6.42, compared with 5.2 for Facebook, $p < 0.01$), and the dominant motivation of a Facebook member was "to stay in touch with friends and colleagues" (mean = 6.17, compared with 5.1 for Twitter, $p < 0.01$). Other reasons that significantly differentiated the networks were "to inform others about my developments" (Twitter 5.84, Facebook 4.69, $p < 0.01$), "to pass the time when bored" (Facebook 5.78, Twitter 4.28, $p < 0.01$), "to generate ideas" (Twitter 5.82, Facebook 3.87, $p < 0.01$), and "to meet interesting people and make new friends" (Twitter 5.7, Facebook 3.89, $p < 0.01$). These differences suggest that Twitter participants use the site to accomplish social and informational goals, whereas Facebook members are more interested in entertainment and keeping in touch with existing networks.

Measures

All the construct measurements used established scales. BRQ with SNS used the condensed version of Fournier's [30] scale containing nine items [43], and brand BESC used the items from Sprott et al. [76]. The outcome variables of behavioral intentions were used in previous research, including Dwyer et al. [23] and Sprott et al. [76] (see Table 1). In particular, Behavioral Intentions Toward the SNS was measured by two items: intention to continue to use the SNS and intention to recommend the SNS to friends. Behavioral Intentions Toward Hosted Brands was measured by three items, including the respondents' likelihood to visit the Web sites for the brands that they follow on the SNS, to make online purchases from these sites, and to recommend these brands to friends and acquaintances. For the purposes of this research, we utilized the Ten-Item Personality Inventory (TIPI) [34] to measure Personality (see the Appendix). This choice was determined because of the highly social nature of the SNS brands under consideration and because prior researchers of social networks' personality indicated the scale's relevance [83]. We calculated the independent variable *perceived personality match* as a sum of five squared distances between the respondents' evaluations of their own TIPI personality dimensions and the SNS TIPI personality scores (with the opposite sign) [58].

Results

Partial least squares (PLS), specifically SmartPLS 2.0 [68], was used to assess the psychometric properties of the measurement model and to test the hypotheses. Our proposed model (Figure 1) contains latent constructs with attitude measurement items (both formative and reflective) to explain the antecedents and consequences of user-perceived BRQ with the SNS. Such measures are rarely normally distributed [60] and do not meet the multivariate normality assumptions required by the alternative covariance-based structural equation modeling method [28]. Chin et al. [17] advocated the use of PLS path modeling when researchers have to estimate a complex model capturing attitudes

Table 1. Measurement Invariance Across Facebook and Twitter Subsamples.

	Facebook	Twitter
BRQ (Brand Relationship Quality with SNS)[a]		
If [SNS] was a person . . .		
he/she would play an important role in my life.	0.849	0.881
he/she would treat me well.	0.783	0.857
he/she would do his/her work well.	0.794	0.817
I could rely on him/her.	0.783	0.727
I would know a great deal about him/her.	0.872	0.794
we would be close friends.	0.777	0.894
I would express strong feelings about him/her.	0.829	0.817
I would understand him/her and would be able to understand his/her thoughts.	0.825	0.835
I would want him/her to keep me company when I feel lonely.	0.784	0.777
BESC (Brand Engagement in Self-Concept)[b]		
I have a special bond with the brands I follow/friend on [SNS].	0.830	0.783
I consider these brands to be part of me.	0.902	0.859
I often feel a personal connection between these brands and me.	0.876	0.901
Part of me is defined by these brands.	0.859	0.889
I feel as though I have a close personal connection with these brands.	0.854	0.898
I can identify with these brands.	0.833	0.843
There are links between these brands and how I view myself.	0.859	0.876
These brands are an important indication of who I am.	0.833	0.913
SNS Brand Intention[c]		
Do you intend to . . .		
continue using [SNS] in the future?	0.955	0.958
recommend [SNS] to your friends or acquaintances?	0.932	0.961
Hosted Brands Intention (How likely are you to)[d]		
How likely are you to . . .		
Visit the web site for the businesses/brands you follow on [SNS]?	0.899	0.902
Make online purchases from these sites?	0.910	0.881
Recommend these brands to friends or acquaintances?	0.906	0.927

Notes: The numbers in the Facebook and Twitter columns indicate the outer factor loadings. Scale anchors: [a] 1 = strongly disagree, 7 = strongly agree; [b] 1 = strongly disagree, 5 = strongly agree; [c] 1 = definitely yes, 5 = definitely not; [d] 1 = very unlikely, 7 = very likely.

and behaviors using a relatively small sample, such as ours. Covariance-based structural equation models are full-information procedures that are less appropriate for early stages of theoretical development because even one wrongly specified structural path or one construct with weak measures will affect all the other estimates throughout the covariance-based structural equation model [17]. PLS path modeling, being a component-based least-squares alternative, is more robust to these issues.

To avoid a construct bias in the Twitter and Facebook subsamples, the invariance of the measurement model was assessed by testing for configural and metric invariance. The configural invariance requirement that the salient
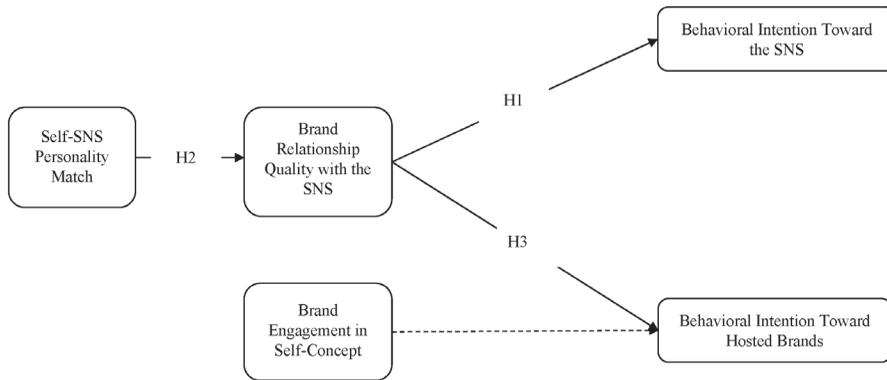
Figure 1. Proposed Theoretical Framework

Note: SNS = social network site.

and nonsalient loadings in the measurement models have similar patterns across subsamples was satisfied. Table 1 shows that the specified measurement model fits both subsamples and that factor loadings are significant in both subsamples. Metric invariance manifests the extent to which the relationship between the items and the factors are equivalent across samples. We conducted Henseler's [40] test for moderation effects, which did not reveal any differences between the strength of the significant path coefficients across the Twitter and Facebook subsamples. None of the moderated analyses showed significant differences between factor loadings. Therefore, we concluded that Twitter and Facebook subjects interpreted the items in the same way and proceeded with the pooled sample analysis.

Composite reliability scores (all equal to or above 0.7) confirmed scale reliability and the internal consistency of the constructs [29]. Since the measure of Perceived Personality Match is formative, we report the reliability measures for BRQ, Brand Engagement, and two behavioral intentions (Table 2). The data show that all the constructs demonstrate satisfactory internal reliability. In addition, consistent with the guidelines of Fornell and Larcker [29], average variances extracted (AVEs) are all above 0.5. Two criteria assessed convergent and discriminant validity of the constructs: (1) each item should have a higher loading on its hypothesized construct than on other constructs and (2) the square root of each construct's average variance explained should be higher than its correlation with other constructs. All items loaded highly on their corresponding construct with low cross-loadings. In addition, the cross-correlations between constructs are much lower than the square roots of AVE of the constructs.

The use of perceptual measures provides the potential for common method variance. To minimize this potential, the survey was arranged such that the dependent variables followed the measurement of the independent variables. Salancik and Pfeffer [70] argued that this approach helps in reducing the effect of common method variance. In addition, in order to empirically test for this potential, Harman's one-factor test was performed by using all the items in

Table 2. Composite Reliability, AVEs, and Construct Correlations.

	Composite reliability	AVE	1	2	3	4	5
1. Brand Relationship Quality with the SNS	0.950	0.677	0.823				
2. Brand Engagement in Self-Concept	0.914	0.571	0.517***	0.756			
3. Behavioral Intention Toward SNS	0.944	0.895	0.435***	0.367***	0.946		
4. Behavioral Intention Toward Hosted Brands	0.940	0.839	0.338***	0.330***	0.130*	0.916	
5. Self-SNS Personality Match	N/A	N/A	0.120*	0.157*	0.121*	0.122	N/A

Notes: The diagonal elements represent square roots of AVE. N/A = not applicable. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

a principal component factor analysis [64]. A substantial amount of common method variance is present when a single factor emerges from the factor analysis or one factor accounts for the majority of the covariance among measures. In our data, four factors emerged from the factor analysis, and each factor explains roughly equal variance. Therefore, the data do not indicate evidence of common method bias. In addition, the correlation matrix did not indicate highly correlated factors (the highest correlation is 0.517), whereas evidence of common method bias should have resulted in extremely high correlation.

The results of the structural model estimation for the pooled data set, including the standardized path coefficients, significance of the paths based on a two-tailed *t*-test, and the amount of variance explained, are presented in Figure 2. Based on the path coefficients, all the hypotheses are supported. BRQ with the SNS explained 34 percent of the variance of Behavioral Intentions Toward the SNS. BRQ with the SNS and BESC jointly explained 36 percent of variance for the Behavioral Intention Toward Hosted Brands followed (or "friended") on the SNS platform. Self-SNS Personality Match, although showing a significant influence, explained only 2 percent of the variance in BRQ with the SNS.

After confirming reliability and validity of the constructs in separate data sets for Twitter and Facebook, we ran the structural model for each SNS separately. Generally, both subsamples' results (Figure 3) supported the findings from the pooled data, with Twitter exhibiting stronger path coefficients and more variance explained than Facebook. We were also interested in exploring potential differences in self-SNS Personality Match trait combinations that affect relationship with the site (Figure 4). Respondents who perceived Twitter similar to them in *openness to new experiences* and *extraversion* considered their relationship with the social network to be of higher quality. For Facebook, only perceived match in *openness to new experiences* was significantly related to BRQ.

Using Chin's [18] method, we compared the corresponding path coefficients in the two models. Results showed that the path coefficient from BRQ to Behavioral Intentions Toward the SNS to use Twitter ($t = 7.40$, $p < 0.01$) is significantly stronger than the corresponding path coefficients in the structural model for Facebook. In addition, the path coefficient from personality match for *openness to new experiences* to BRQ is significantly higher for Twitter ($t = 3.16$, $p < 0.01$). There were no significant differences in other path coefficients.

Discussion and Managerial Implications

The results highlight the important role brand relationships play in the context of social media by supporting positive effects of BRQ with an SNS on a number of important outcomes. In particular, BRQ explains 34 percent of members' intentions to continue using the social network platform in the future and to recommend the platform to their friends. Furthermore, together with engagement with the hosted brands followed ("friended") on the SNS platform, BRQ helps explain 36 percent of user intentions to visit Web sites of these hosted brands, to recommend them to friends and acquaintances, and to make online purchases. These findings not only support the possibility of
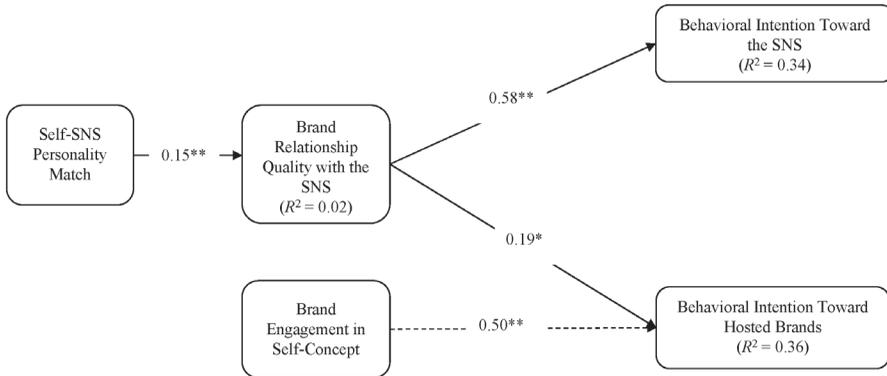
Behavioral Intention Toward
the SNS
($R^2 = 0.34$)

Self-SNS
Personality
Match

0.15**

Brand
Relationship
Quality with the
SNS
($R^2 = 0.02$)

0.58**

0.19*

Brand
Engagement in
Self-Concept

0.50**

Behavioral Intention Toward
Hosted Brands
($R^2 = 0.36$)

Figure 2. Structural Model Testing Results for Combined Facebook and Twitter Data

Notes: SNS = social network site. ** $p < 0.01$; * $p < 0.05$.

Behavioral Intention Toward
the SNS
TW ($R^2 = .0058$)
FB ($R^2 = 0.019$)

Self-SNS
Personality
Match

TW 0.27 **
FB 0.08

Brand
Relationship
Quality with the
SNS
TW ($R^2 = 0.07$)
FB ($R^2 = 0.02$)

TW 0.76 **
FB 0.44 **

TW 0.26 *
FB 0.23 *

Brand
Engagement in
Self-Concept

TW 0.51 **
FB 0.20 *

Behavioral Intention Toward
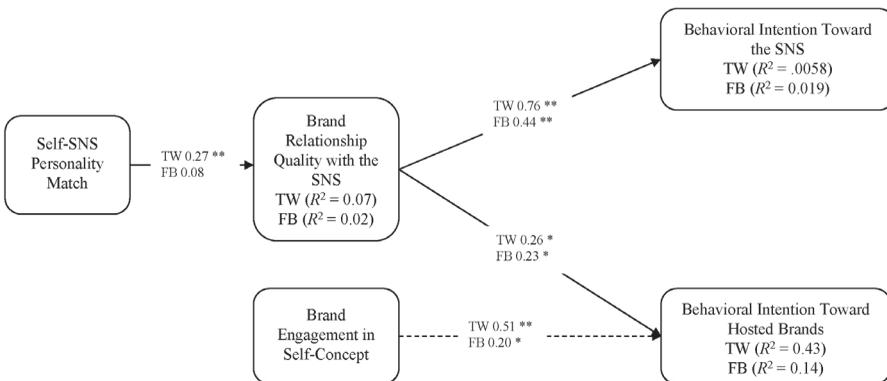Hosted Brands
TW ($R^2 = 0.43$)
FB ($R^2 = 0.14$)

Figure 3. Structural Model Testing Results for Twitter and Facebook Data

Notes: SNS = social network site; TW = Twitter; FB = Facebook. ** $p < 0.01$; * $p < 0.05$.

relationship formation with social media sites (e.g., Facebook and Twitter) but also illustrate the role of the quality of these relationships in influencing such important behaviors as continued social media participation and positive word of mouth, as well as referrals and visits to other hosted brands' Web sites. Notably, by utilizing (BESC) engagement with hosted brands as a control variable, we could definitively affirm the effect of BRQ with the SNS on behavioral intentions toward those hosted brands, over and above the effect of consumer prior connections with the brands. Our findings suggest that SNSs and companies that are followed on these sites might benefit from designing and implementing relationship-building-focused processes to strengthen user participation in the SNS and enhance engagement with hosted brands [7, 8, 84].
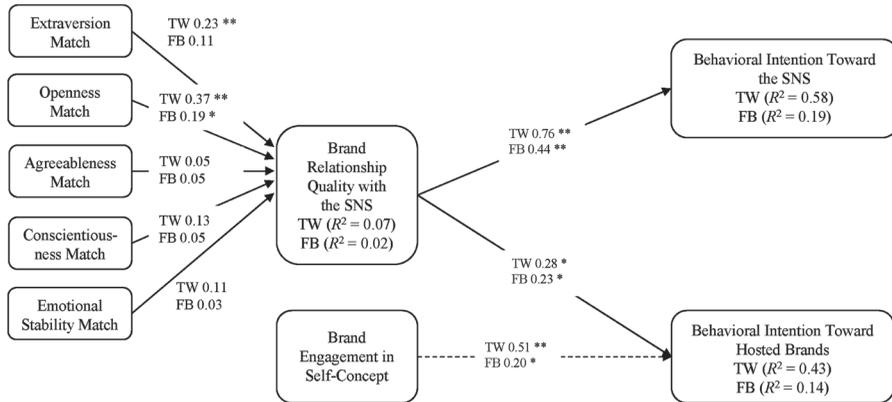
Figure 4. Structural Model Testing Results for Twitter Facebook Data with All Five Personality Match Variables

Notes: SNS = social network site; TW = Twitter; FB = Facebook. ** $p < 0.01$; * $p < 0.05$.

Our results also suggest that the personality characteristic *openness to new experiences* appears to improve brand relationship with both Facebook and Twitter, whereas perceived similarity in the characteristic *extraversion* plays a role only in influencing the relationship with Twitter. We do not find an influence for the match in other personality traits (*emotional stability, conscientiousness,* and *agreeableness*) on relationship quality with SNS. Previous research recognizes that both *extraversion* and *openness to new experiences* predispose people to socialize; however, *extraversion* is considered critical in new-tie formation [83], which may explain its low salience for members of the Facebook preexisting social networks. In addition, Facebook user profiles generally contain much greater amounts of information, which may impede stereotyping the generic Facebook personality in terms of the Big Five traits [24]. Prior findings report that *extraversion* and *openness to new experiences* are easier to recognize in users' social network profiles than the other three personality traits [33], which may also explain their greater salience in our findings.

Another observation is that in order to increase membership and stimulate desirable consumer behaviors, social media sites could attune their brand identities to those of their participants to facilitate formation of stronger relationships. This may involve voluntarily limiting the target segment of potential users by projecting a more narrowly defined and specific image to attract customer segments with certain personality traits. The findings of this study also point out that, strategically, advertisers should utilize different approaches depending on the site's projected personality characteristics and the quality of users' perceived relationship with the site. For example, it appears that on social networks attracting and forming relationships with users who are *extraverted* and *open to new experiences*, advertisers should refrain from direct sales and promotional efforts. Instead, activities that intensify brand engagement, such as information on community involvement and new product development (or activities such as product development and co-creation) may

be more effective. However, it is worth noting that three of our personality dimensions were not significant, and personality match, although showing a significant influence, explained only 2 percent of the variance in BRQ with the SNS. Based on this, caution should be taken in drawing explicit implications from our study.

Limitations and Future Research

Some limitations of this study warrant caution in generalizing our results to broader populations. The method of snowball sampling could have introduced selection bias in the data collection. Random sampling in subsequent studies is recommended to reduce the impact of such bias. Another limitation of this study was the method of aggregating multiple hosted brands/businesses for some of our dependent variables (e.g., intention to visit hosted brand's Web site, intention to make a purchase, and intention to recommend to friends). Future research should consider conducting the analysis at the individual hosted brand/business level—a method adjustment that would require a larger sample size. Another limitation that should be addressed by future research is lack of separation between the familiar hosted brands and those brands that were newly introduced to consumers on the SNS platform. Future research should also investigate other factors that may influence the strength of BRQ with an SNS, such as the length of membership, activity levels, and size of participants' networks, as well as company-controlled communications, technology evolution, and managerial actions that manifest brand relationship reciprocity to network participants. Furthermore, while our study focused on examining the influence of relationship quality with the SNS on hosted brands, future research is encouraged to examine the influence of hosted brands on users' image and relationship quality with the SNS.

This study is among the first to compare brand personalities of two SNSs that differ in audiences, functions, and freedom to follow, or friend, other members. Our study finds that the perceived match in *extraversion* is more important in developing relationships with the microblogging site Twitter, whereas perceived match in *openness to new experiences* is important in developing relationships with both Twitter and Facebook but plays a stronger role for Twitter. This may be because the limited length of "tweets" makes Twitter unique in terms of its members' goals and needs. For example, in addition to maintaining social relationships with friends, Twitter also "broadcasts" important news and updates to broader audiences. In this sense, Twitter may be considered a "niche" social medium, for which personality match with its audience may play a more important role in attracting members. Facebook, on the other hand, mainly supports strong-ties networks of face-to-face friends and relatives. Future research should assess brand personalities within other social media to provide strategic brand personality–based differentiation recommendations to their management and advertisers.

Another fruitful area of future research may be a longitudinal investigation of new social media adoption processes and sources of their personality perceptions, as well as stages of relationship development between the social

media site and its members. Furthermore, future research should also explore the potential of negative spillover effect of lower relationship quality with the SNS on the brands hosted on the SNS. Unfortunately, our data do not allow us to explicitly test this potential negative spillover, since we did not survey those who stopped using SNS, only those who were still using them. It may also be interesting to understand how signaling social identity and affiliation with a new network to others may virally facilitate its growth. Finally, investigating the role of online personalities created by small business advertisers on social media sites in brand relationship creation, member engagement with brands, and desirable consumer behaviors may contribute to developing winning online business strategies.

Conclusion

This research demonstrates applicability of brand-related marketing theories to the social media context. In particular, it contributes to the literature by supporting the validity of self-brand relationships in the virtual environment, whereby individuals join and form stronger ties with social networks that convey personality characteristics similar to their own. Study findings also reveal that perceived strength of a relationship with an SNS not only facilitates future intentions to continue using this platform and recommend it to others but also strengthens preferences for other brands that are hosted on the SNS for marketing purposes. This study also highlights the appropriateness of the brand co-creation metaphor that renders consumers as active participants in developing relationships with an SNS through repeated interactions with other consumers on the site, expressing emotions, displaying their personalities, and inferring and conveying brand meaning [81].

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Appendix: Descriptive Statistics of the Items and Reliability Measures

Factors	Mean	SD
BRQ[a] [43] (composite reliability = 0.95, AVE = 0.67)		
If [SNS brand] was a person . . .		
he/she would play an important role in my life.	3.82	1.76
he/she would treat me well.	4.28	1.43
he/she would do his/her work well.	4.41	1.49
I could rely on him/her.	4.29	1.54
I would know a great deal about him/her.	4.48	1.57
we would be close friends.	4.03	1.58
I would express strong feelings about him/her.	3.59	1.62
I would understand him/her and would be able to understand his/her thoughts.	3.87	1.57
I would want him/her to keep me company when I feel lonely.	3.97	1.67
Brand engagement[b] [76] (composite reliability = 0.96, AVE = 0.75)		
Do the statements below reflect your attitude toward most of the brands you follow/friend on [SNS brand]?		
I have a special bond with these brands.	2.90	1.31
I consider these brands to be part of me.	2.73	1.08
I often feel a personal connection between these brands and me.	2.72	1.11
Part of me is defined by these brands.	2.62	1.50
I feel as though I have a close personal connection with these brands.	2.55	1.07
I can identify with these brands.	3.29	1.24
There are links between these brands and how I view myself.	2.64	1.17
These brands are an important indication of who I am.	2.54	1.11

Personality/[SNS brand] Personality[c] [76]

Please rate the adjectives below according to how well each describes your personality. Please think about [SNS brand] as if it were a person and rate the adjectives below according to how well each describes [SNS brand]'s personality.

	Mean	Mean	SD	SD
Extraverted, enthusiastic	5.23	5.54	1.28	1.32
Critical, quarrelsome	3.84	4.32	1.32	1.61
Dependable, self-disciplined	5.71	3.91	1.16	1.46
Anxious, easily upset	3.62	3.85	1.45	1.47
Open to new experiences, complex	5.37	5.32	1.10	1.27
Reserved, quiet	3.52	2.58	1.53	1.53
Sympathetic, warm	5.33	3.73	1.30	1.47
Disorganized, careless	2.87	3.65	1.41	1.58
Calm, emotionally stable	5.16	3.61	1.17	1.46
Conventional, uncreative	3.17	3.09	1.28	1.44

Notes: Scale anchors: [a] 1 = strongly disagree, 5 = strongly agree; [b] 1 = strongly disagree, 7 = strongly agree; [c] 1 = extremely noncharacteristic, 7 = extremely characteristic.

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