The influence of social media interactions on consumer–brand relationships: A three-country study of brand perceptions and marketing behaviors

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ABSTRACT

Companies are increasingly allocating more of their marketing spending to social media programs. Yet there is little research about how social media use is associated with consumer–brand relationships. We conducted three studies to explore how individual and national differences influence the relationship between social media use and customer brand relationships. The first study surveyed customers in France, the U.K. and U.S. and compared those who engage with their favorite brands via social media with those who do not. The findings indicated that social media use was positively related with brand relationship quality and the effect was more pronounced with high anthropomorphism perceptions (the extent to which consumers' associate human characteristics with brands). Two subsequent experiments further validated these findings and confirmed that cultural differences, specifically uncertainty avoidance, moderated these results. We obtained robust and convergent results from survey and experimental data using both student and adult consumer samples and testing across three product categories (athletic shoes, notebook computers, and automobiles). The results offer cross-national support for the proposition that engaging customers via social media is associated with higher consumer–brand relationships and word of mouth communications when consumers anthropomorphize the brand and they avoid uncertainty.

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1. Introduction

Social media platforms have emerged as a dominant digital communication channel via which consumers learn about, share information on, and interact with brands they consider, purchase, and evaluate (Chappuis, Gaffey, & Parvizi, 2011; Qualman, 2013). Over 2.7 billion people globally are online, or approximately 40% of the world's population (ICT, 2014). Over half of online adults in the U.S. use two or more social networking sites (Pew Internet, 2014), with sites such as Facebook, Google+ and LinkedIn now commonly used to navigate content on the Web in addition to or instead of traditional search engines (Bughin

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et al., 2011). And with near 100% penetration of mobile-cellular phones worldwide (ICT, 2014), social media are increasingly accessed and used at all times and places. Marketers are therefore adapting their strategies to reach increasingly networked consumers, and are placing more emphasis on competing for consumers' social media attention to drive customer engagement.

Through social media, marketers can interact in two-way communications with existing and potential customers and gain rich, unmediated consumer insights faster than ever before. Marketers also see the value of social media networking, brand referrals and information sharing. According to Facebook, the average user has 130 friends on the social network, and when people hear about a product or service from a friend, they become a customer at a 15% higher rate than when they find out about it through other means (comScore, 2011). Additionally, social media offers potential for generating awareness and interest through viral or rapid spreading of product and service experiences and opinions (Berger & Milkman, 2012). As a result, companies are proactively engaging in new social media marketing strategies and tactics (Neff, 2014). General Motors has moved 25% of its global marketing spending on the Cadillac brand into digital platforms compared to 17% three years ago, with an emphasis on video distributed through digital and social media (Learmonth, 2012). American Express has 1.5 million card members participating in its Sync program that lets members match their cards to their Facebook, Foursquare, and Twitter social media accounts for browsing offers and making transactions (Klaassen, 2012).

While the availability of social media is now widespread and companies in many industries are integrating social media into their communication strategies, little marketing research has been done to reveal the effects of social media interaction on consumer attitudes and behaviors and its underlying processes. Most of the existing research only deals with the characteristics of social media and how the differences from traditional media are challenging marketing strategies (e.g., Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). These studies are more descriptive than empirical (Laroche, Habibi, & Richard, 2013), and the limited findings of the effects of social media interaction are mixed. While there is an enthusiastic call for encouraging more social media interaction for companies' survival in modern markets (Kaplan & Haenlein, 2010), results to date are inconclusive. For example, a study by SocialBakers (2014) shows that the amount of social media interactions leads to more visits to the brand's website, while others suggest that social media engagements are ineffective in stimulating brand loyalty and sales (Traphagen, 2015).

To leverage the interactive and engagement dimensions of social media, more and more marketers have changed their marketing objectives, focusing on building/maintaining a desirable consumer–brand relationship via social media interaction. Despite the importance of branding and relationship building in the digital world, little is known about how social media relates to consumers' relationships with brands, and whether social media-based brand relationships are associated with desired outcomes such as customer satisfaction and recommendations. Fournier and Avery (2011) even warned brands to be cautious about social media involvement because the brands might be "uninvited crashers" of social media, implying that building brand relationships via social media is more complicated than simply encouraging more interactions. These questions particularly puzzle global brands that are facing multi-cultural customers. Can the same social media strategy work across borders? There are intense debates about centralized vs. localized social media presences among international firms (Gale, 2013; Smith, 2012). Therefore, empirical studies that look into social media interaction effects on brand relationships in diverse cultures are needed.

The current research addresses these gaps and explores the relationship between social media interactions and consumer perceptions of their relationship with the brands, and consequently how those interactions relate to desired marketing outcomes. More specifically, we sought to answer the following questions about social media and customer–brand relationships: To what extent are social media interactions associated with *perceptual* brand outcomes, in particular customer perceptions of brand relationship quality? In the context of social media, are the aforementioned brand perceptions associated with *behavioral* marketing outcomes such as brand evaluation and willingness to recommend? Also, what role does brand anthropomorphism play in this process? And to what extent do cultural differences influence the relationship between social media interaction and brand relationships? As Smit, Bronner, and Tolboom (2007) suggest, research is needed on the influence of marketing tools on brand relationships. So whether and how social media engagement is associated with customers' brand perceptions, satisfaction with their purchases, and willingness to recommend them to others, are important questions this study seeks to address.

This research makes a number of contributions. First, we explore whether social media interaction (presence, frequency, amount) influences the perception of brand relationship quality and marketing behavioral outcomes using real cross-national data. Second, we investigate boundary conditions (brand anthropomorphism and uncertainty avoidance) that could potentially facilitate or impair the relationship between effects of social media interaction and brand relationship building. Third, our results reveal a possible dark side of high social media engagement, which is counterintuitive to common practice and helpful for guiding marketers to plan an optimal social media strategy.

2. Conceptual framework

2.1. Consumer–brand relationships, brand relationship quality and social media

The relationships organizations are able to manifest between customers and their brands have become an important focus in marketing (Fournier, 1998; Fournier & Avery, 2011; Fournier, Dobscha, & Mick, 1998). The win–win of consumer–brand relationships is that consumers derive satisfaction through greater attachment to brands, and that firms that better understand and respond to customer needs generate more brand loyalty and profitability. To achieve these goals requires more connections and interactions between consumers and brands so as to foster meaningful relationships between them.

From a research perspective, the strength and depth of the person–brand relationship has attracted increasing interest in marketing (see Sirgy, 1982). Belk (1988) and Kleine, Kleine, and Allen (1995) both suggested that people often regard their possessions as part of themselves and an important component of their sense of self. Phau and Lau (2001) showed that consumers

project their own personality characteristics onto their brands when describing them. Customers who project their self on brands display strong attachment with the same brand (Escalas, 2004). Blackston (1993) conceptualized a reciprocal relation between brands and consumers, arguing that the consumer's recognition of the brand's attitude toward consumers should be incorporated into the study of brand image. The brand therefore becomes an active partner of a consumer on the basis of the brand–consumer relationship. Aaker (1996) too argued that when consumers interact with brands, they can develop an active relationship with those brands like people can with friends.

Researchers commonly adopt Fournier's (1998) conceptualization of brand relationship quality (BRQ) for studying consumer–brand relationships. BRQ was developed to explain that consumers do not just buy brands because they work well. Purchase behavior is also due to the perceived relationships customers have with a collectivity of brands so as to benefit from the meanings they add into their lives (Fournier, 1998). Some of those meanings are functional and utilitarian; others are more psychological and emotional. All, however, are perceived as purposive and ego centered and therefore of great significance to the persons engaging them. Important factors sustaining BRQ are affective and socio-emotive attachments (love/passion and self-connection), behavioral ties (interdependence and commitment), and supportive cognitive beliefs (intimacy and brand partner quality), all of which combine to yield strength and durability over time (Fournier, 1998).

Fournier's model has been tested in various settings. Ekinci, Yoon, and Oppewal (2005) found strong support for the validity of the BRQ concept from the European consumer's point of view in the context of restaurant brands. The four dimensions of brand relationship identified in their study were partner quality, nostalgic connection, self-concept connection and intimacy. Kim, Lee, and Lee (2005) also found that self-connected attachment was strongly correlated with BRQ. In their study, they compared product to service brands and discovered one meaningful difference; with product brands, commitment explains BRQ better than does trust, whereas with service brands, trust accounts for BRQ more so than does commitment.

Despite the growing literature on BRQ as a critical marketing construct, to date research has not examined customer–brand relationships in the context of social media. The goal of this study therefore is to determine if social media use has a positive relationship with BRQ. One could anticipate that it does. Prior research in marketing has generally identified more positive effects of social media presence than absence. Rothschild (2011) looked at how social media is used, managed, and perceived by sports and entertainment venue managers, and found that many (57%) have a defined social media strategy, and experience higher revenues than those that do not. A recent study by Medallia found that hotel properties that actively engage with social media reviews grow occupancy at double the rate of properties that don't (Hertzfeld, 2015). Chadwick Martin Bailey research (Cruz & Mendelsohn, 2010) shows that the likelihood for individuals to buy or recommend increases after they follow a brand via social media. Finally, a study conducted by GE found that consumers respond much more positively to content shared through social media than they do to paid placements such as advertising. Specifically, consumers that viewed a GE video via social media sharing were 83% more likely to have positive perceptions of GE than those exposed to the same content via paid advertising (Neff, 2012). However, these studies do not describe the processes or mechanisms through which social media use affects behavioral outcomes.

As interest in the brand-building benefits of social media use grows, more research is needed to guide marketers in a digital world. Since brand relationship is often fostered and progressed gradually, the research focus should be extended from superficial social media presence (e.g., yes or no) to more in-depth dimensions of social media interaction (e.g., frequency and amount). Social media interaction refers to a consumer's proactive engagement with the brand on social media platforms such as following, replying, tweeting, sharing, liking, participating and so on. Consumers' proactive interaction with the brand on social media can be viewed as "a customer's level of cognitive, emotional and behavioral investment in specific brand interactions" (Hollebeek, 2011, pp. 565). De Wulf, Oderkerken-Schroder, and Iacobucci (2001) found that the more the customers' relationship investment, the higher their commitment to maintain the relationship. Therefore, the more time consumers spent in social media interaction with the brand yielded a higher relationship investment and thus stronger BRQ. Furthermore, during the interaction, consumers may get benefits from the brand by increasing their knowledge of the product/services, reducing the risk of consumption, and thus increasing their sense of trust. Two-way interaction often involves a response from a brand. Porter and Donthu (2008) found that a company's efforts in an online community can enhance trust in the company. When the brand interacts with followers by replying to comments, solving problems, and inviting participation, consumers generate a feeling of connection and thus experience a higher level of relationship quality. Just as frequent social interactions between two people often leads to greater interdependence and closeness (Altman & Taylor, 1973), interacting with a brand via social media can function like an interpersonal social interaction and foster an emotional attachment and a feeling of intimacy. The two-way communication and interactivity social media offers between customers and companies about products and services offers compelling brand-building potential. This connectivity should foster relational benefits between customers and brands. It is proposed therefore that brand relationships will be enhanced when customers engage with their favorite brand using social media. That is, social media interaction is likely to enhance BRQ.

2.2. Anthropomorphism and brand relationships

Anthropomorphism refers to the attribution of a human form, human characteristics or human behavior to nonhuman things (Bartneck, Croft, & Kulic, 2009). Although the concept has been discoursed among philosophers for hundreds of years, it is only recently being applied in marketing. According to Brown (2010) its appeal is poorly understood, despite the fact that humanity's anthropomorphic inclination is increasing in intensity. This inclination, Guthrie (1995) suggests, is attributable to humankind's innate need to personify. Epley, Waytz, Akalis, and Cacioppo (2008) believe that the anthropomorphic process is used to satisfy two

basic needs that other humans (or the concept of humans) can satisfy in everyday life—the need for social connection and the need for control and understanding of the environment.

According to Kim and McGill (2011) there are two distinct forms of anthropomorphism. One is analogical in nature. In such instances human schema are used to cognitively process and communicate human characteristics. For instance, a brand that is perceived as meeting expectations may be described as trustworthy. Yet the brand may not be perceived as possessing other human characteristics. The second form of anthropomorphism entails deeper associations than mere analogical thinking. In the second form, humanlike mental states are also associated with objects. In so doing, the objects trigger social and behavioral beliefs possessed by people. This second form of anthropomorphism can ease the process of viewing customer–brand relationships akin to interpersonal relationships and subsequently influence people's behaviors toward the humanized object. For example, Chandler and Schwarz (2010) showed that people were less willing to replace a product when they saw it having a humanlike mind.

While there is evidence for consumers' ability to view brands as possessing human characteristics (e.g., Levy, 1985; Plummer, 1985) and endowing various personality traits (Aaker, 1997), readiness to anthropomorphize can vary by brand. For example, when interacting with the Michelin Tire brand (vs. Americus Tire) on social media, consumers should be easier (harder) to shift the consumer–object mode into interpersonal mode. Puzakova, Kwak, and Rocereto (2009) introduced the concept of anthropomorphized brands, defining them as "brands perceived by consumers as actual human beings with various emotional states, mind, soul, and conscious behaviors that can act as prominent members of social ties" (pp. 413). People can view the same brand in different degree of brand anthropomorphization. Brand anthropomorphism perception is affected by individual and brand factors. Epley, Waytz, and Cacioppo (2007) pointed out that people who have higher accessibility and applicability of anthropocentric knowledge will view the brand higher in brand anthropomorphism. Moreover, objects that share human traits (shape, movement, voice, etc.) are more readily to be viewed as humanlike. The higher the brand anthropomorphism, the more likely consumers will apply social norms to view and deal with the relationships with the brands.

While anthropomorphism has received attention in the marketing literature, to date research has not examined it in the context of social media. Consumer–brand social media interaction involves the interaction with a non-human object. The link between social media interaction and BRQ might not be direct and cannot be taken for granted. We propose that brand anthropomorphism is a key factor that facilitates the formation and maintenance of ongoing consumer–brand relationship. Aggarwal and McGill (2007) suggest that a human rather than an object schema should be activated to generate positive responses to a smiling face in the car. They further posit that anthropomorphized brands rather than non-anthropomorphized brands trigger people's goals for a successful social interaction, resulting in behavior that is assimilative. They ran an experiment to manipulate the Kellogg's brand (a healthy brand) as human vs. object, and found that if people liked the brand, they would be more likely to assimilate a healthy lifestyle and take the stairs rather than elevator. However, if they disliked the brand, they showed opposite patterns (e.g., taking the elevator). These effects only occurred when they anthropomorphized Kellogg's as a human.

Reasonably, we can expect consumers who are cognitively ready to see a brand as a relationship partner will have a higher motivation to interpret their social media interaction with the brand like an interpersonal relationship and thus enhance their perception of BRQ. We predict therefore that social media interaction's positive association with BRQ will be more likely to occur when brand anthropomorphism is high.

2.3. Cultural differences and uncertainty-avoidance

Will high anthropomorphism always guarantee a positive link between social media interaction and BRQ? Are there situations when social media interaction with an anthropomorphized brand does not work well? Kim and McGill (2011) suggest that the social belief and expectations of the consumers will lead to different perceptions of the same anthropomorphized object. Power is a fundamental drive in social interactions (Fiske & Dépret, 1996). When interacting with an anthropomorphized entity, desire for power/control will immediately rise and affect judgment. This implies that risk/uncertainty concern will play a role in consumers' evaluation of their social media interaction with a humanized brand. When thinking of their interaction with the brand on social media, some people are more likely than others to judge the usefulness/meaningfulness of such interaction by a criterion—whether this interaction helps reduce risk and enhance personal power. Thus risk reduction function is particularly important to some individuals. The deviations in importance people place on risk/uncertainty concerns in evaluating their relationship with others may originate from cultural influences. In some populations, people chronically avoid uncertainty and prioritize risk reduction over other factors (Hofstede, 2001).

Marketers realize that understanding cultural similarities and differences is crucial to communicating with customers and developing effective international marketing campaigns. One of the most accepted theories in cross-cultural and marketing research was developed by Geert Hofstede (2001). He defined culture as the collective mental programming of the people in an environment, suggesting that culture is not a characteristic of individuals; it encompasses a number of people who were conditioned by the same education and life experience. Uncertainty avoidance was one of five unique value dimensions to emerge from Hofstede's work, and represents "the extent to which the members of a culture feel threatened by uncertain or unknown situations" (Hofstede, 201, pp. 161).

Research has established the effects of uncertainty avoidance on a wide range of behaviors (Lim, Leung, Sia, & Lee, 2004). For example, studies have shown that people in high uncertainty avoidance cultures show a strong resistance to change, while those in low uncertainty avoidance cultures do not fear the future and exhibit lower change resistance. Several marketing researchers (Hermeking, 2006) have demonstrated that cultures with low uncertainty avoidance are more open to innovations like the Internet as a new medium of communication; that is, they tend to be early adopters with a high diffusion rate.

Epley et al. (2007) propose that this particular cultural dimension should influence anthropomorphism; that is, individuals from cultures that score highly on uncertainty avoidance should be more prone to activate and apply anthropomorphic representations as a means to establish comprehensibility and predictability than those from cultures that score low. Individuals from cultures high in uncertainty avoidance "look for structure…which makes events clearly interpretable and predictable" (Hofstede, 2001, pp. 148), and Epley et al. suggest that anthropomorphism is likely to be one readily available method of attaining this structure and reducing the anxiety from uncertainty.

Consumer risk avoidance tendencies should affect expectation toward the interaction partner, in our context the anthropomorphized brand. When uncertainty avoidance is high, people expect that they could reduce the risks by frequent social interactions because simply anthropomorphizing the brand might not fulfill their great anxiety for control; when the uncertainty avoidance is low, they are less likely to hold this expectation toward the social media brand interaction because they do not have such high anxiety, especially when the interaction target is already an anthropomorphic brand (which is less risky). Too much interaction may seem redundant and even become a burden. Therefore, we predict that for individuals high in uncertainty avoidance, a positive relationship between BRQ is likely when there is frequent social media interaction with an anthropomorphic brand.

3. Studies and results

3.1. Study 1

The aim of study 1 was twofold. The first was to test whether social media interaction is associated with brand perception and relationship quality depending on brand anthropomorphism. The second was to examine if the moderating effect of brand anthropomorphism differs depending on uncertainty avoidance. According to the anthropomorphism literature, the effectance motive, which refers to the intentions to reduce risks and make things under control, drives brand anthropomorphism (Epley et al., 2007). Thus, we predict that social media interaction and its joint function with brand anthropomorphism on BRQ may have cultural differences such that in the countries with higher uncertainty avoidance and desire for control, this effect will be more likely to occur. Three countries (France, United Kingdom, United States) were carefully selected based on the following considerations: they are developed countries similar in most cultural dimensions but differ in uncertainty avoidance (Hofstede, 2001; House et al., 2004). The uncertainty avoidance scores on Hofstede's indexes for France, U.S., and U.K. are 86, 46, and 35, respectively, representing high, medium, and low levels. The focal stimuli for study 1 were athletic shoe brands.

3.1.1. Participants

A commercial market research firm was used to identify and create a panel of 18–35 year old consumers in each country. To qualify for the survey, each respondent had to wear athletic shoes three or more days per week. They also had to have owned in the past 12 months at least one out of a set of seven brands. As such, all respondents had category familiarity and recent knowledge of and experience with at least one of the athletic shoe brands. Consumers in each country were asked if they owned in the past year one or more of seven different athletic shoes brands. If they did, they were then asked to identify which of the brands they own was their favorite. The remaining questions on their social media activity and brand feelings and behaviors pertained specifically to their favorite brand.

The consumers in this subject panel were classified as social media users and non-users based upon whether they interacted in the past month with their favorite brand of athletic shoes using any type of social media. Random number generator algorithm was used to select 1000 consumers from "social media user" and 1000 from "social media non-user" categories. The email invitation was sent to 2000 consumers with compensation of a $5 or similar value in euros e-gift card. Five hundred and thirty three consumers completed our survey (236 users and 296 non-users), with a response rate of 26.6%.

3.1.2. Procedures and measures

Participants first wrote down the brand name of their favorite athletic shoe. They were then exposed to a "verification question" about their social media interaction experience with their favorite athletic shoes brand in the past month. Specifically, they responded to a question "Have you ever interacted with XXX brand (embedded with the answer of their specified favorite brand) on social media in the past month?" This question helped verify the correctness of the classification and further strengthened the scenario of social media interaction (users = 1; non-users = 0).

Participants then described their favorite brand using a six-item semantic differential scale (fake–real, conscious–unconscious, artificial–natural, humanlike–machinelike, sincere–insincere, approachable–avoidable) adapted from Bartneck et al. (2009). This scale was originally developed for the anthropomorphism of robots. As such, one of their items (moving rapidly-moving elegantly) was dropped and replaced with the sincere–insincere item. A semantic anchor format was used, where the first anchor was at 0 on the scale and the second anchor was at 100. The six-item scale yields a good reliability ($\alpha = .87$).

Following the brand anthropomorphism measure, a 16-items brand relationship quality (BRQ) scale (Smit, Tolboom, & Franzen, 2004; Smit et al., 2007) was used to test the perception of their relationship with the brand. Respondents indicated their agreement to the statements on a 7-point scale anchored by strongly disagree and strongly agree ($\alpha = .95$). This BRQ scale included eight dimensions: passion, intimacy, self-connection, nostalgic connection, love, partner quality, personal commitment and trust. The Appendix A provides the complete set of BRQ items for each study.

Three brand evaluation questions then followed, including "how satisfied were you with your favorite brand?; how well has the brand met your expectations?; and how would you compare the brand to an ideal athletic brand?" on 7 point Likert scales

(from "Not at all" to "Very much so") ($\alpha = .90$). A one-item 11-point Net Promoter Score (NPS) scale asking how likely respondents would be to recommend the brand was also presented to capture marketing behavioral outcomes.

The questionnaire was developed and pre-tested in English. For the U.K. version of the survey, three people native to the U.K. proofed the U.S. version and corrections were made to any terms or phrases unique to the U.S. The final version was translated from English to French, then back-translated in preparation for data collection in France. Three natives of France also proofed the translated French survey for phrasing corrections.

3.1.3. Results

Multiple regression analysis was first conducted with the full sample of all three countries. Social media use (users = 1, non-users = 0), mean-centered brand anthropomorphism and their interaction on BRQ revealed significant main effects of social media interaction ($\beta = .15$, $t(523) = 4.10$, $p < .001$), brand anthropomorphism ($\beta = .49$, $t(523) = 11.0$, $p < .001$) and the interaction ($\beta = .09$, $t(523) = 2.07$, $p < .04$). The simple slope of brand anthropomorphism was positive and significant in both the social media use condition ($\beta = .65$, $t(523) = 10.8$, $p < .001$) and nonuse condition ($\beta = .49$, $t(523) = 11.0$, $p < .001$). Spotlight analyses (Fitzsimons, 2008) revealed that BRQ was higher in social media use compared to the nonuse condition at one standard deviation above the mean of brand anthropomorphism ($\beta = .22$, $t(523) = 4.54$, $p < .001$) and no differences between these two conditions were at one standard deviation below the mean of brand anthropomorphism ($\beta = .07$, $t(523) = 1.30$, $p > .19$; see Fig. 1). The results indicate that only when the brand was highly anthropomorphized is social media use associated with BRQ more so than non-use.

The same regressions were run to test the interaction effect of social media and brand anthropomorphism on brand evaluation and NPS. The results yield similar patterns as those for BRQ. The significant interactions showed that as brand anthropomorphism increased, the social media interaction was associated with higher brand evaluation ($\beta = .09$, $t(523) = 2.12$, $p < .04$) and higher willingness to recommend the brand to friends and colleagues ($\beta = .08$, $t(523) = 1.69$, $p < .001$). See Table 1 for the regression results.

To test for cultural differences, we ran the regressions separately for each country (see Table 2). Interestingly, the interaction of social media use and brand anthropomorphism on BRQ only holds for the French data ($\beta = .14$, $t(209) = 2.00$, $p < .05$) but not for the U.S. ($\beta = .11$, $t(166) = 1.43$, $p > .15$), or the U.K. ($\beta = -.05$, $t(140) = -.54$, $p > .58$). The same regressions on brand evaluation replicated these results; the only significant interaction was found in France ($\beta = .17$, $t(209) = 2.51$, $p < .02$). Furthermore, the interaction was significant for NPS in France ($\beta = .17$, $t(209) = 2.31$, $p < .03$), but not significant in the U.S. or the U.K.

Considering the constrains of survey data, we further regressed social media interaction, mean-center BRQ and their interaction on brand anthropomorphism and found the interaction was not significant ($p > .85$), ruling out the possibility that the interplay of social media use and BRQ might lead to brand anthropomorphism.

3.1.4. Discussion

This cross-country survey provides initial evidence for social media use and brand anthropomorphism's association with BRQ, brand evaluation and NPS. The significant and positive main effects of social media use and brand anthropomorphism on BRQ are identical in the U.K., U.S. and France. The results suggest that social media interaction presence (vs. absence) and the higher (vs. low) brand anthropomorphism, the better consumers' relationship quality with the brand. However, the significant interaction between these two factors on BRQ, brand evaluation and NPS only occurs in France but not in the U.K. and U.S. The differences could be attributed to the variances in uncertainty avoidance. Since social media use can enhance the knowledge of the brand and thus decrease the uncertainty, it is possible that people with high uncertainty avoidance, such as the French, will particularly appreciate the high social media interaction with an anthropomorphized brand.
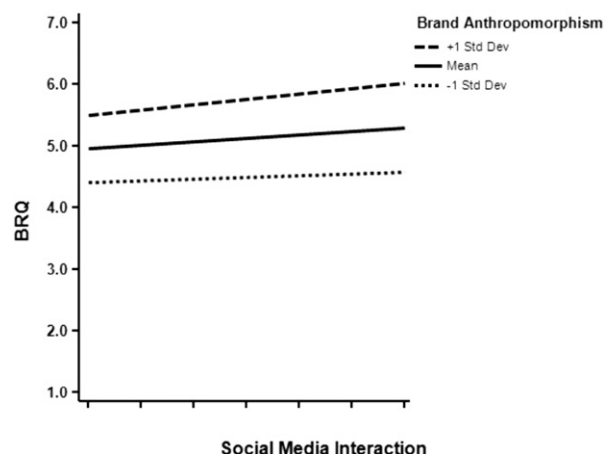

Fig. 1. Study 1: Brand relationship quality as a function of social media use and brand anthropomorphism. Note.—The values of social media interaction represented on the x-axis range from social media nonuser (0) to social media user (1).

Table 1
Study 1: the interplay of social media interaction and brand anthropmoprhism.

	BRQ	Brand evaluation	NPS
Anthropomorphism	β = .49, t(523) = 11.0, p < .001	β = .58, t(523) = 13.4, p < .001	β = .54, t(523) = 12.0, p < .001
Social media use	β = .15, t(523) = 4.10, p < .001	β = −.03, t(523) = −.97, p > .33	β = −.03, t(523) = −.77, p > .44
2 Way interaction	β = .09, t(523) = 2.07, p < .04	β = .09, t(523) = 2.12, p < .04	β = .08, t(523) = 1.69, p < .10

Although the survey data provides some insights about social media use and anthropomorphism on BRQ, it has unavoidable limitations in terms of the noises in defining causality. So next we moved to a more controlled laboratory environment to further validate our findings. Similar to prior research, study 1 only focused on the one dimension of social media interaction-presence (yes or no). However, specific characteristic of social media interaction such as frequency can be more helpful in revealing the influences on brand relationship perception. After all, relationship development is more likely to be affected by how much time is invested rather than simply presence. Therefore, our second study extended the social media interaction from presence to frequency.

3.2. Study 2

The purpose of study 2 was to test further whether the associations between social media use and BRQ depend on brand anthropomorphism. Study 2 advances the findings from study 1 in several ways. First, we manipulated brand anthropomorphism rather than measuring it. Second, we manipulated social media interaction *frequency* (high vs. low), rather than categorizing consumers as social media users and nonusers. Third, we changed the target stimulus from athletic shoes to a new product (notebook computer) to generalize the results. Fourth, we included a multi-item word of mouth recommendation measure as the dependent variable. Thus, study two uses a 2 social media interaction frequency (high vs. low) × 2 anthropomorphic thinking (human vs. object) between subject design.

3.2.1. Participants and procedures

Two hundreds and seven undergraduate students from a U.S. business school participated in the study for course credit. They first wrote down the brand name of their laptop and the answer was embedded in the relevant following questions. The participants were randomly exposed to anthropomorphic thinking priming or object priming (adopted from Chandler & Schwarz, 2010). Specifically, in the anthropomorphic thinking condition, participants were asked to imagine their laptop as a person, make a nickname for the laptop and describe what personalities the nicknamed laptop would have. After the writing task, they evaluated the laptop using personality traits (reversed–enthusiastic; quarrelsome–sympathetic; irresponsible–dependable; ugly–charming; anxious–calm). In the object priming condition, participants were asked to describe the favorite features and functionality of their laptop and then evaluate their laptop using product characteristics (loud–quiet; too heavy weight–perfect weight; small storage–big storage; appearance design bad–appearance design good; CPU slow–CPU fast). Then the participants were randomly assigned to social media interaction frequency (high vs. low) conditions (adopted from Hamilton, Ratner, & Thompson, 2011). Participants were asked to imagine following the laptop brand on social media and to respond to a question "How frequently do you think you would interact with the laptop brand on social media?" from a 7 point Likert-type low frequency scale (1 = at least once a week; 7 = less than once a year) or a high frequency scale (1 = at least once a day; 7 = less than once a week). After the manipulations, participants answered BRQ questions (the 16 items employed in study one, α = .95), brand evaluation (3 items from study one, α = .98), and word of mouth (3 items: "I would recommend this brand to friends and relatives; I will speak positively about this brand; I intent to encourage other people to buy laptops from this brand." α = .96; Kuenzel & Halliday, 2008). Finally, participants answered manipulation check and demographic questions.

Table 2
Study 1: The interplay of social media interaction and brand anthropmorphism across countries.

	BRQ			Brand evaluation			NPS		
	UK	US	France	UK	US	France	UK	US	France
Anthropomorphism	β = .63 t = 7.12 p < .001	β = .54 t = 7.36 p < .001	β = .34 t = 4.65 p < .001	β = .68 t = 7.93 p < .001	β = .67 t = 9.10 p < .001	β = .47 t = 6.70 p < .001	β = .72 t = 8.54 p < .001	β = .66 t = 9.01 p < .001	β = .39 t = 5.18 p < .001
Social media use	β = .13 t = 1.95 p < .001	β = .15 t = 2.33 p < .02	β = .16 t = 2.63 p < .01	β = −.03 t = −.47 p > .63	β = −.02 t = −.35 p > .72	β = −.03 t = −.53 p > .60	β = .02 t = .23 p > .81	β = −.04 t = −.59 p > .55	β = −.03 t = −.50 p > .61
2 Way interaction	β = −.05 t = −.54 p > .58	β = .11 t = 1.43 p > .15	β = .14 t = 2.00 p < .05	β = −.004 t = −.05 p > .96	β = .03 t = .37 p > .71	β = .17 t = 2.51 p < .02	β = −.07 t = −.87 p > .38	β = .03 t = .36 p > .72	β = .17 t = 2.31 p < .03

3.2.2. Results

The manipulation check by a three-item brand anthropomorphism scale asking to what extent participants felt their laptop comes alive/see the laptop as a human/ regard the laptop human-like ($\alpha = .90$; Aggarwal & McGill, 2007) confirmed the successful manipulation of anthropomorphic thinking priming ($M_{human} = 3.37$ vs. $_{Mobject} = 1.84$; $F(1, 206) = 54.7$, $p < .001$).

ANOVA analyses were conducted (see Table 3). Social media interaction frequency, anthropomorphic thinking priming, and their interaction as independent variables and relationship duration (How long have you owned your laptop?) as the covariate on BRQ revealed a significant main effect of social media interaction frequency ($F(1,203) = 18.2$, $p < .001$), anthropomorphic thinking ($F(1,203) = 14.3$, $p < .001$), and their interaction ($F(1,203) = 15.8$, $p < .001$), and a non-significant result of relationship duration ($p > .92$). The simple effect of social media interaction at the level of human priming condition was significant ($M_{human} = 5.98$ vs. $_{Mobject} = 4.62$; $F(1,203) = 32.0$, $p < .001$; see Fig. 2) but was not significant at the level of object priming condition ($p > .84$). These results replicated the results of study 1 in that both social media interaction and brand anthropomorphism are positively associated with BRQ. However, the social media interaction effect on BRQ will be more effective when the brand has been humanized. When the brand is perceived as an object, the low or high social media interaction frequency does not have any differences.

The same ANOVA analyses with brand evaluation as the dependent variable yielded a significant main effect of social media interaction frequency ($F(1,203) = 10.8$, $p < .01$), anthropomorphic thinking ($F(1,203) = 5.23$, $p < .03$), and their interaction ($F(1,203) = 10.8$, $p < .01$) and a non-significant result of relationship duration ($p > .65$). The simple effect of social media interaction at the level of human priming condition was significant ($M_{human} = 6.94$ vs. $_{Mobject} = 6.01$; $F(1,203) = 15.5$, $p < .001$) but not significant at the level of object priming condition ($p > .54$).

In study 2, we used a multi-items scale of word of mouth (WOM) to replace the single-item Net Promoter Score from study 1. The ANOVA results with WOM as the dependent variable showed a marginally significant main effect of anthropomorphic thinking ($F(1,203) = 3.83$, $p < .06$), a significant main effect of social media interaction frequency ($F(1,203) = 13.8$, $p < .001$), and their interaction ($F(1,203) = 14.1$, $p < .001$). The covariate of relationship duration did not affect the word of mouth ($p > .84$). The simple effect of social media interaction was significant at the level of human priming ($M_{human} = 6.74$ vs. $_{Mobject} = 5.19$; $F(1,203) = 26.3$, $p < .001$) but not significant at the level of object priming ($p > .97$).

3.2.3. Discussion

Study 2 replicated and extended study 1 in a lab setting and with a different focal product category, using the manipulated brand anthropomorphism and social media interaction frequency. The results further confirm our predictions that social media interaction has a positive association with BRQ and this relationship depends on brand anthropomorphism. Only when the brand is highly anthropomorphized does the high frequency social media interaction have a greater effect than low frequency interaction. For the products/brands low in anthropomorphism, the social media interaction frequency does not make any difference. The results suggest that social media interaction is more likely to benefit a brand high in anthropomorphism.

3.3. Study 3

Study 2 results suggest that social media interaction has a positive association with BRQ when the brand is highly anthropomorphized. Study 3 addresses whether these associations hold across different cultures. We propose that while consumers enhance BRQ by high social media interaction with an anthropomorphized brand, the relationship enhancement would be more likely to occur among cultures high in uncertainty avoidance. Since social media interaction can increase the knowledge and understanding between the consumer and the brand, the reduced uncertainty would be more anticipated by the people in high uncertainty avoidance than low uncertainty avoidance. For an anthropomorphized brand, high frequency interaction meets the expectation of high uncertainty avoidance individuals while low frequency interaction might be even below their expectation and lead to anxiety and disappointment. For a low anthropomorphized brand, people may not have an expectation to build an interpersonal relationship with the brand and therefore, uncertainty avoidance will not affect their expectations of social media

Table 3
Study 2: BRQ/product evaluation/word of mouth as a function of social media interaction and anthropomorphic thinking.

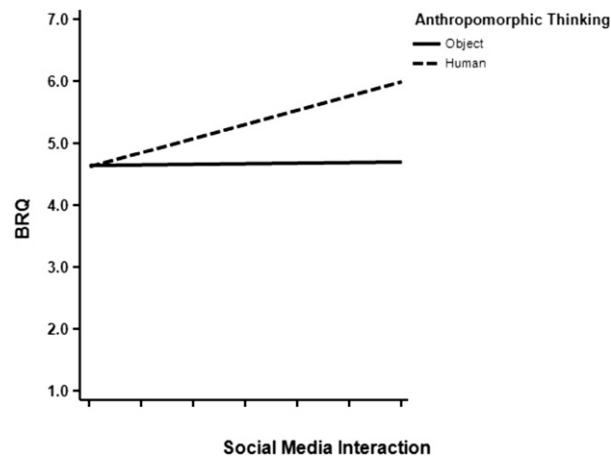|		Social media interaction frequency (high)	Social media interaction frequency (low)	Contrast
BRQ	Anthropomorphic thinking (human)	5.98	4.62	$F(1, 203) = 32.0$, $p < .001$
	Anthropomorphic thinking (object)	4.70	4.66	$F(1, 203) = .04$, $p > .83$
Brand evaluation	Anthropomorphic thinking (human)	6.94	6.01	$F(1, 203) = 15.5$, $p < .001$
	Anthropomorphic thinking (object)	6.17	6.04	$F(1, 203) = .37$, $p > .54$
Word of mouth	Anthropomorphic thinking (human)	6.74	5.19	$F(1, 203) = 26.3$, $p < .001$
	Anthropomorphic thinking (object)	5.55	5.56	$F(1, 203) = .001$, $p > .97$

Fig. 2. Study 2: Brand relationship quality as a function of the frequency of social media interaction and anthropomorphic thinking. Note.—The values of social media interaction represented on the x-axis range from social media interaction frequency low (0) to social media interaction frequency high (1).

interaction with the brands. To further generalize the results, we used a new product category (automobile) and non-student adult consumer samples from Amazon Mturk. Different from the short version 16-items BRQ scale used in previous studies, we included a full version 30-item more widely used BRQ scale ($\alpha = .98$; Fournier, 2008) to deepen the insights of BRQ. In this scale, BRQ has 7 dimensions including interdependence, love/commitment, partner quality, self-connection, nostalgic attachment, intimacy (consumer to brand), and intimacy (brand to consumer). Moreover, we manipulated social media interaction amount instead of frequency. Thus study 3 employed a 2 anthropomorphic priming (first person pronounce vs. third person pronounce) × 2 social media interaction amount (high vs. low) × a measure of uncertainty avoidance (Erdem, Swait, & Valenzuela, 2006).

3.3.1. Participants and procedures

Two hundred and eighty one Mturk workers joined a study about their car. Similar to study 2, they first indicated the brand name of their own car and the answer was embedded in other questions related to their car brand. Brand anthropomorphism was manipulated by reading a paragraph describing the car using the first person vs. the third person pronouns (procedures adopted from Aggarwal & McGill, 2007). Previous research has showed that using the first person pronouns (e.g., I'm a new family member of Toyota) generates higher brand anthropomorphism feelings than using the third person (e.g., This is a new model of Toyota). Then the participants were randomly assigned to social media interaction amount (high vs. low) conditions. Specifically, they responded to a question "How much time do you think you would spend on interaction with XXX brand on social media on an average weekday" on a low amount scale (1 = up to 5 min, 5 = more than 30 min) or a high amount scale (1 = up to 30 min, 5 = more than 2.5 h; procedures adopted from Hamilton et al., 2011). After the manipulations, participants answered some questions about BRQ, brand loyalty, and word of mouth. Following the demographics and some filler tasks, we measured their uncertainty avoidance by a 7 point likert three-item scale (Erdem et al., 2006) including the statements "Security is an important concern in my life; Life is so uncertain that one must continuously be on the alert so as not to be caught at a disadvantage; It is important to consider dissenting views when making personal and social decisions." Neither the manipulation of anthropomorphic priming (F(1,136) = .20, p > .65) nor social media interaction (F(1,136) = .02, p > .88) affected this personal trait of uncertainty avoidance.

Table 4
Study 3: BRQ/Product evaluation/word of mouth as a function of social media interaction and uncertainty avoidance.

	Anthropomorphic priming		
	BRQ	Brand loyalty	Word of mouth
Uncertainty avoidance	β = .02 t = .18 p > .85	β = .06 t = .54 p > .59	β = .04 t = .40 p > .69
Social media interaction frequency	β = .007 t = .10 p > .92	β = .01 t = .16 p > .87	β = -.002 t = −.03 p > .98
2 Way interaction	β = .30 t = 2.84 p < .01	β = .20 t = 1.83 p < .07	β = .25 t = 2.35 p < .03

3.3.2. Results

Study 2 found that high frequency social media interaction has a stronger association than low frequency social interaction with BRQ when the brand is highly anthropomorphized. Study 3 was designed to show that even when the brand was highly anthropomorphized, the high interaction might not always be associated with stronger BRQ, for example, if the uncertainty avoidance is low. Thus, we are interested in the situation that once the brand had been anthropomorphized, whether social media interaction's association with BRQ depends on uncertainty avoidance. We therefore separated the results of anthropomorphizing brands and non-anthropomorphizing brands.

Regression analyses with the social media interaction amount, mean centered uncertainty avoidance and their interaction on BRQ, were conducted and the results reported in Table 4. Under the non-anthropomorphizing priming, the interaction was not significant and thus served as a base for comparison and we only focused on the results in the anthropomorphic priming condition. In line with our predictions, there was a significant interaction between social media interaction amount and uncertainty avoidance on BRQ in the anthropomorphic priming condition ($\beta = .21$, $t(171) = 2.84$, $p < .01$). The simple slope of uncertainty avoidance was positive and significant in the social media high amount condition ($\beta = .43$, $t(171) = 4.31$, $p < .001$) but not significant in the social media interaction low amount condition ($\beta = .02$, $t(171) = .18$, $p > .85$). Spotlight analyses (Fitzsimons, 2008) revealed that BRQ was stronger in the social media interaction high amount condition as compared to the social media interaction low amount condition at one standard deviation above the mean of uncertainty avoidance ($\beta = .22$, $t(171) = 2.12$, $p < .04$) and unexpectedly opposite results occurred at one standard deviation below the mean of uncertainty avoidance ($\beta = -.20$, $t(171) = -1.94$, $p < .06$; see Fig. 3). The results suggest that high amount interaction with an anthropomorphized brand facilitated BRQ when uncertainty avoidance was high. However, high amount social media interaction with an anthropomorphized brand might not be necessary and even unwanted when uncertainty avoidance was low. In other words, low amount social media interaction might be even better than high amount interaction for people in low uncertainty avoidance.

The same regression analyses were conducted using the seven dimensions of BRQ as dependent variables. Interestingly, the interaction between social media interaction amount and uncertainty avoidance was (at least marginally) significant on interdependence ($\beta = .19$, $t(171) = 1.74$, $p < .09$) love/commitment ($\beta = .25$, $t(171) = 2.35$, $p < .03$), partner quality ($\beta = .22$, $t(171) = 2.04$, $p < .05$), self-connection ($\beta = .26$, $t(171) = 2.45$, $p < .02$), nostalgic attachment ($\beta = .33$, $t(171) = 3.13$, $p < .01$), intimacy (consumer to brand) ($\beta = .28$, $t(171) = 2.55$, $p < .02$), and intimacy (brand to consumer) ($\beta = .34$, $t(171) = 3.24$, $p < .01$).

Regression analyses were conducted with social media interaction amount, mean centered uncertainty avoidance, and their interaction on brand loyalty. In line with our predictions, there was a significant interaction between social media interaction amount and uncertainty avoidance on brand loyalty in the anthropomorphic priming condition ($\beta = .25$, $t(171) = 2.35$, $p < .03$). The simple slope of uncertainty avoidance was positive and significant in the social media high frequency condition ($\beta = .33$, $t(171) = 3.21$, $p < .01$) but not significant in the social media interaction low frequency condition ($\beta = .04$, $t(171) = .40$, $p > .69$). Though the spotlight analyses were not significant at one standard deviation above or below the mean of uncertainty avoidance, the patterns were identical to the BRQ results (see Fig. 4).

Regression analysis was next conducted with the social media interaction amount, mean centered uncertainty avoidance, and their interaction as independent variables and word of mouth as dependent variable. As predicted, there was a significant interaction between the two independent variables ($\beta = .25$, $t(171) = 2.35$, $p < .03$). The simple slope of uncertainty avoidance was positive and significant in the social media high amount condition ($\beta = .39$, $t(171) = 3.83$, $p < .001$) but not significant in the social media interaction low amount condition ($\beta = .04$, $t(171) = .40$, $p > .69$). Spotlight analyses (Fitzsimons, 2008) revealed that WOM was higher in the higher amount social media interaction condition as compared to the low amount social media interaction condition at one standard deviation above the mean of uncertainty avoidance ($\beta = .17$, $t(171) = 1.68$, $p < .10$) and
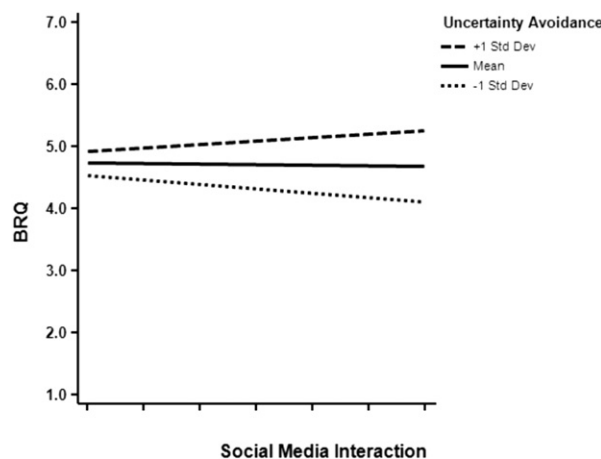

Fig. 3. Study 3: Brand relationship quality as a function of the amount of social media interaction with anthropomorphic brand and uncertainty avoidance. Note.—The values of social media interaction represented on the x-axis range from social media interaction amount low (0) to social media interaction amount high (1).
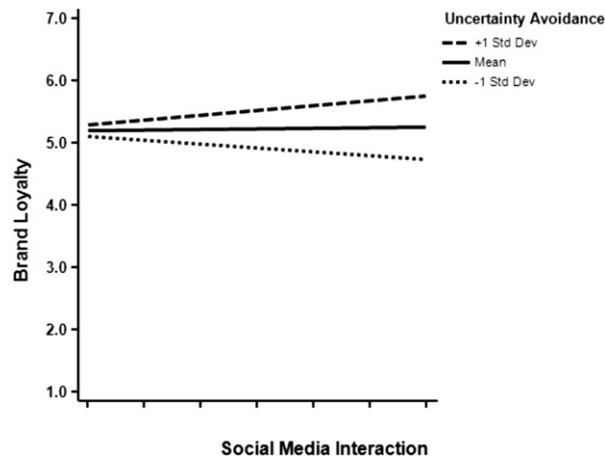
Fig. 4. Study 3: Brand loyalties as a function of the amount of social media interaction with anthropomorphic brand and uncertainty avoidance. Note.—The values of social media interaction represented on the x-axis range from social media interaction amount low (0) to social media interaction amount high (1).

results reversed at one standard deviation below the mean of brand anthropomorphism ($\beta = -.18$, $t(171) = -1.68$, $p < .10$; see Fig. 5).

3.3.3. Discussion

Study 3 results further extended the results of study 2 by showing that high social media interaction with an anthropomorphized brand is associated with stronger BRQ. Such a relationship is dependent on a consumer's uncertainty avoidance. When uncertainty avoidance was high, increased social media interaction with an anthropomorphized brand was associated with stronger BRQ and greater word of mouth as compared to a low amount of social media interaction. However, when the uncertainty avoidance was low, a high amount social media interaction might be as strongly associated with BRQ as when social interaction amount is low. We did not predict the negative impact of high amount social media interaction. However, this result suggests that too much social media interaction with an anthropomorphized brand might violate the expectation of low uncertainty avoidance people and hurt rather than benefit the BRQ.

4. General discussion

The current research tested the social media interaction effect on consumer brand relationships using cross-country survey data and experimental data. The results show that social media interaction has a positive effect on BRQ and other marketing outcomes. This effect is more pronounced when the brand is highly anthropomorphized and when the consumers are high in uncertainty avoidance. The social media interaction and brand anthropomorphism were both measured and manipulated by different methods. The results were validated by various samples including consumers from U.K., U.S., France, student samples and the Mturk workers, and were generalized to different product categories (athletic shoes, laptops and automobiles), yielding robust effects and consistent findings.
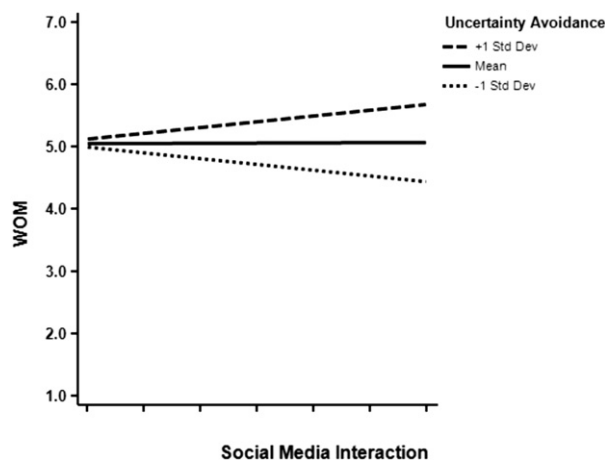

Fig. 5. Study 3: Word of mouth as a function of the amount of social media interaction with anthropomorphic brand and uncertainty avoidance. Note.—The values of social media interaction represented on the x-axis range from social media interaction amount low (0) to social media interaction amount high (1).

In general, compelling evidence was found to show that social media use makes a difference. Consumers that engage with their favorite brands using social media have stronger relationships with those brands compared with consumers who do not interact with their favorite brands using social media. These results were evident across three national markets. Thus for practitioners, investments in social media programs can provide marketing benefits when they succeed in facilitating customer–brand interactions, supporting emerging research referred to earlier that shows that brands that conduct social media interactions with consumers in a meaningful way are seeing a positive impact on the bottom line (Cruz & Mendelsohn, 2010; Hertzfeld, 2015; Neff, 2012).

Our research contributes to the understanding of brand anthropomorphism on consumer brand relationships in the digital world. While anthropomorphizing brands will not guarantee that consumers form a strong relationship with the brand, anthropomorphism is an important catalyst facilitating an interpersonal lens to view social media interactions with a brand. This provides implications for marketers using social media. For example, it might be wise to first stimulate anthropomorphizing the brand to some degree before rushing to create social media engagement. High social media interaction/engagement will be more successful for humanized brands such as M&M Chocolates and Michelin. However, for other products/brands low in anthropomorphism, marketers might want to introduce anthropomorphic strategies when managing their social media accounts (Rauschnabel & Ahuvia, 2014). For example, giving a nickname to the brand, using an animated image as a portrait, and/or using the first-person tone may facilitate anthropomorphizing.

The findings show that BRQ is a critical and pivotal construct for understanding customer–brand relationships in the context of social media use. Extending the literature that BRQ is an important construct for assessing consumer–brand relationships (Bowden, 2009; Ekinci et al., 2005; Fournier, 1998; Kim et al., 2005), the current research demonstrates its relevance for social media marketing and identifying how BRQ relates to other behavioral outcomes such as word of mouth.

Examining cross-cultural differences and how the cultural deviations affect consumer behavior are vital to international marketing (Markus & Kitayama, 1991). While research in psychology and marketing tend to emphasize the cultural dimensions individualism vs. collectivism and independent vs. interdependent, other cultural dimensions have received less attention. The digital world is virtual and intangible. Social media interaction should have more uncertainty and less control compared to face-to-face communication. Therefore, uncertainty avoidance might be particularly salient to some online consumers. The current research highlights this important yet understudied cultural dimension. Lim et al. (2004) and Roth (1995) suggest that marketing tactics need to be tailor-made to take into consideration the cultural differences of individual countries. We further advise social media specialists to consider uncertainty avoidance motivations across borders.

This study has also shown that anthropomorphizing a brand and encouraging frequent social media interactions may work better in countries high in uncertainty avoidance. Similarly, marketers must be careful not to bombard consumers with social media communications unless they buy-in. Some marketing experts have suggested that an over-reliance on social media can damage a brand (Brownstein, 2010), and this may particularly be the case in cultures where uncertainty avoidance is low. Brands in these countries may be better off engaging in 'permission marketing' (Godin, 1999), a concept based on the premise that the attention of the consumer is a scarce commodity that needs to be managed carefully. Its emphasis is on building relationships with consumers instead of interrupting their lives with mass marketing messages.

Like all studies, ours has limitations. The country samples were not large enough to explore effects of different types of social media on perceptions and behaviors, a shortcoming that can be addressed in future research. Further research is also needed involving other sample frames in an effort to validate the studies' findings. Future studies might include a wider variety of countries from high to low along the uncertainty-avoidance index. It would also be fruitful to examine the effects of different cultural dimensions on anthropomorphism, social media interaction and BRQ. These could include relatively new dimensions like humane orientation (House et al., 2004) and societal cynicism (Bond et al., 2004), as well as Hofstede's original dimensions like power distance and individualism. Finally, a deeper examination of the type of social media usage/interaction would be useful in understanding how factors such as the level of social media involvement influence BRQ.

Despite the limitations, the research provides a sound basis for future work on social media use and brand building. One such avenue would be to conduct a field experiment and measure consumers' actual social media interaction frequency and engagement with a brand in a period of time, adding stronger causal inferences of the social media interaction effects on consumer–brand relationships. Another is to explore the quality of social media interaction (e.g., joining a discussion with the brand on social media should result in a higher quality interaction than simply liking a post). Further research could also integrate the measurement of brand perceptions. This study focused on BRQ. Other brand perception constructs are emerging in the literature that may also be impactful for understanding consumer–brand relationships in the context of social media, including emotional attachment (Malär, Krohmer, Hoyer, & Nyffenegger, 2011) and brand attachment (Park, MacInnis, Priester, Eisingerich, & Iacobucci, 2010). It may also be fruitful to assess moderating effects of social media use on brand perceptions and behaviors. Algesheimer, Dholakia, and Herrmann (2005), for example, show that brand knowledge moderates the relationship between social influence and perceptions of brand community. Factors such as brand knowledge, degree of brand use, and brand strength may shed further light on conditions under which social media use can be most effective.

Appendix A. 16-Item BRQ Scale (used in study 1 and study 2)

q1: It is a feeling of loss when I have not worn my Nike shoes for a while.
q2: Something would definitely be missing in my life should Nike not exist anymore.
q3: I have the feeling that I really understand Nike
q4: It feels like I have known Nike for a long time.

q5: Nike and I have lots in common.
q6: Nike reminds me of who I am.
q7: Nike reminds me of things I have done or places I have been.
q8: Nike will always remind me of a certain period in my life.
q9: I have feelings for Nike that I do not have for a lot of other brands.
q10: If it is about athletic shoes, Nike is my most favorite brand.
q11: Nike has always been good to me.
q12: Nike treats me as an important and valuable customer.
q13: Nike can always count on me.
q14: I will continue wearing Nike shoes in the near future.
q15: I trust Nike.
q16: Nike is an honest brand.
Note: The Nike brand is shown here for illustration purposes. The brand respondents' selected as their favorite automatically appeared in each question.

A.1. 30 Item BRQ Scale (used in study 3)

Interdependence

1. I need this brand and rely on its benefits.
2. This brand is an integral part of my daily life.
3. I dependent on this brand.

Love/commitment

4. This brand and I are perfect for each other.
5. I really love this brand.
6. Though of not being able to use this brand disturbs me.
7. I am very loyal to this brand.
8. I am willing to make sacrifices to keep using this brand.
9. I have unique feelings for this brand.
10. I no longer keep eye out for alternatives.

Partner quality

11. This brand takes care of me.
12. This brand listens to me.
13. This brand makes up for mistakes.
14. I can count on this brand to do what's best for me.
15. This brand is responsive to my concerns.

Self connection

16. This brand is part of me.
17. This brand makes statement about what's important to me.
18. This brand connects with part of me that makes me tick.
19. This brand and I fit with life goals or problems.
20. By using this brand, I'm part of a shared community.
21. This brand helps me develop relationship with others who use the same brand.

Nostalgic attachment

22. I have sentimental feelings for this brand.
23. This brand reminds me of phase of my life.
24. Thoughts of this brand contain personal memories.

Intimacy (consumer–brand)

25. I know this brand's history/background.
26. I know what this brand stands for.
27. I know more about this brand than average consumer.

Intimacy (brand–consumer)

28. The company understands my needs.
29. This company knows me so well, could design product for me.
30. This company knows a lot about me as person.

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