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Following Celebrities' Tweets About Brands: The Impact of Twitter-Based Electronic Word-of-Mouth on Consumers' Source Credibility Perception, Buying Intention, and Social Identification With Celebrities

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Two experiments examined the impact of Twitter followers, electronic word-of-mouth (eWoM) valence, and celebrity type (prosocial versus antisocial) on consumer behavior in Twitter-based marketing communication, applying social capital theory, social identity theory, source credibility, and extant literature on eWoM. Experiment 1 demonstrated the main effect of number of followers on source credibility, and the interaction effect between eWoM valence and number of followers on product involvement, buying intention, and intention to pass along eWoM. Experiment 2 revealed the interaction effect of celebrity type and number of followers on social identification with the celebrity as well as the mediating effect of social identification.

Social media, a term which refers to "Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content" (Kaplan and Haenlein 2010, p. 61), has been the biggest buzz on Web 2.0 in recent years. Advertisers are increasingly capitalizing on consumers' skyrocketing usage of social media sites, including Facebook, Twitter, and Pinterest, to promote their brands. The utility of social media sites lies in their influence over coveted demographics (e.g., teens and young adults) that have migrated from more traditional mass media such as newspapers and television (Li and Bernoff 2011; Solis 2011). At the same time, social media sites serve as an unparalleled platform for consumers to publicize their evaluations of purchased products, thus facilitating word-of-mouth (WoM) communication (Chen, Fay, and Wang 2011) and impacting such key elements of the company–consumer relationship as brand image and brand awareness (Jansen et al. 2009).

In light of social media's potential as a vehicle for reaching and interacting with consumers, this experimental study addressed the emerging issue of electronic WoM (eWoM) via celebrities' use of Twitter. The term *eWoM* refers to "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig-Thurau et al. 2004, p. 39). The current research focused on eWoM posted by celebrities via Twitter, one of the most popular and influential microblogging sites, which has more than 500 million registered users, approximately 15% of all online adults (Smith 2011). The ability to post and read status updates on Twitter has made it very useful for measuring eWoM and public opinion with regard to products and services (McStay 2009; Scott 2011). Furthermore, the proliferation of Twitter among world netizens has led to its use during events of international significance (e.g., the Iranian protests of 2009; the Japan earthquake/tsunami disaster of 2011) to inform, alert, and update the general public when traditional news media cannot be utilized (Grossman 2009).

Recently, Twitter has received growing attention from scholars across disciplines including communication, education, linguistics, media studies, political science, and sociology. However, relatively little attention has been paid to the marketing implications of Twitter despite its strong potential as an interactive advertising platform. To the best of our knowledge, no existing literature has examined the influence of celebrities'

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Twitter-based eWoM on consumer behavior in an experimental setting. To fill this gap in the literature, the current research sought to explicate the conditions under which celebrities can be leveraged as effective catalysts for brand-related eWoM on Twitter. The current research particularly focused on the potential of Twitter-based microblogging by celebrities as a forum for facilitating eWoM marketing communication. It applied theoretical frameworks including source credibility (Louie and Obermiller 2002; Ohanian 1990; Tripp, Jensen, and Carlson 1994), social capital theory (Bourdieu 1986; Putnam 2000), social identity theory (Tajfel and Turner 1986), and the extant literature on eWoM (e.g., Campbell et al. 2011; Hargittai and Litt 2011; Mangold and Faulds 2009). More specifically, this research examined the effects of number of followers, valence of tweets, and type of celebrity (prosocial versus antisocial) on brand-related outcomes (e.g., product involvement, buying intention, and intention to spread eWoM) as well as the social influence of celebrity-generated eWoM on interpersonal communication aspects of interactive advertising. Type of celebrity was manipulated by having study participants read different versions of a *New York Times*–style article about a celebrity who was either engaged in philanthropic and charity work (defined as "prosocial") or involved in a drug abuse and adultery scandal (defined as "antisocial").

LITERATURE REVIEW

Twitter is a microblogging site allowing users to post short text (maximum 140 characters) updates called "tweets" to a network of people called "followers." In the United States, Twitter has been adopted as the social media site du jour for celebrities, athletes, and politicians. The most-followed Twitter accounts as of 2013 belong to pop stars, including Justin Bieber, Lady Gaga, and Katy Perry (each with more than 30 million followers), and other public figures, including President Barack Obama (27 million followers), talk show hosts Oprah Winfrey and Ellen DeGeneres (17 million followers each), and soccer star Cristiano Ronaldo (16 million followers) (Twitter Counter 2013). The more followers one garners on Twitter, the greater perceived social influence one has. This is particularly because tweets are broadcast to each and every follower, who may then retweet these posts on their own profiles, which are then rebroadcast to thousands of other Twitter members (Schaefer 2012; Scott 2011). It is no coincidence that to be "trending" (i.e., phrases or topics that are tagged at a greater rate than others) on Twitter at any given point in time is equivalent to having one's movie become a box-office hit or one's hit single rank on the Billboard chart; in other words, Twitter can be utilized as a form of social capital (Jin 2013; Li and Bernoff 2011; Putnam 2000).

Social capital theory defines *social capital* as resources created through people's social relationships that can be harnessed to achieve positive social outcomes (Bourdieu 1986; Burt 1992). These social relationships engender a system of trust and reciprocity that facilitates productive activity (Coleman 1988) and operates in the same way as financial capital, benefiting individuals by connecting them to other people who are influential and important within their social sphere (Lin 2001; Putnam 2000). The Internet facilitates the acquisition and accumulation of social capital through its ability to connect people from disparate geographical locations, from different age groups, and with diverse interests who can offer help and advice on a variety of topics (Norris 2002; Phua and Jin 2011; Williams 2006). This is akin to what Granovetter (1973) refers to as "weak ties" or loose social connections that help to accelerate flow of new information and novel ideas among social groups. In particular, social media sites such as Twitter enable individuals to accumulate "weak ties," allowing them, for instance, to follow celebrities and other public figures and to engage with them directly through reading and sending short, 140-character messages. As a result of their direct connections to their favorite celebrities on Twitter, individuals gain access to social resources otherwise unavailable to them offline. The aggregation power of Twitter, particularly its role in bringing together the followers of one's profile, can easily be harnessed by advertisers for the promotion of their brands and products. When celebrities mention a brand or product in their tweets, extolling its virtues, their endorsements are broadcast simultaneously to potentially millions of followers, ensuring maximum exposure for brand messages. This has prompted Hollywood firms, such as PMK·BNC, to introduce new measurement tools to rank top celebrities' influence levels (such as "Klout Scores") as well as their appeal to particular target audience groups so as to match them with the most appropriate brands for eWoM (Hampp 2011; Schaefer 2012). In many cases, celebrities who proclaim their love for a particular brand on Twitter eventually become formal endorsers (Hampp 2011).

Celebrities are well-known individuals who receive significant media attention (McCracken 1989). A celebrity endorser is defined as "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement" (McCracken 1989, p. 310). Using celebrities to endorse a product is a popular strategy for advertisers because of their significant influence on consumers' brand awareness and loyalty (Miller and Laczniak 2011). In 2006, $2 billion was spent on celebrity advertising in the United States alone (White, Goddard, and Wilbur 2009); and in 2011, Nike spent $2.4 billion on celebrity endorsements (Cendrowski 2012). Companies invest in celebrities to improve brand recognition and trustworthiness and to create positive attitudes or distinct personalities for the endorsed brand (McCracken 1989). Thus, source attractiveness and credibility models are integral to the literature on celebrity endorsement. This research examined the effects of celebrities' Twitter-based brand messages on consumers' source credibility perception.

The exponential growth of celebrities' Twitter usage has blurred the clear dividing line between product consumers and product advertisers (Hampp 2011). *Consumer-generated advertising* refers to specific instances when consumers

create brand-focused messages with the intention of informing, persuading, or reminding others (Berthon, Pitt, and Campbell 2008). *Consumer-generated ads*, operationally defined as "any publicly disseminated, consumer-generated advertising messages whose subject is a collectively recognized brand," and the subsequent conversations consumers evoke in social media, can be considered a form of eWoM communication (Campbell et al. 2011, pp. 88–89) and a more reliable source of information about brands than market-generated content (Mangold and Faulds 2009). Celebrities who tweet about brands and products on Twitter are often seen by their followers as fellow social media users, whether or not they are official brand endorsers; therefore, their eWoM about these brands are seen as more credible and trustworthy than if they had appeared in television or print advertisements for the same brands (Russell 2012; Schaefer 2012).

Twitter can be used to harness consumers' relationships with their favorite celebrities for building brands and eWoM. Hargittai and Litt (2011) found that interest in celebrities and entertainment news is a significant predictor of Twitter use. Lin and Pena (2011) examined TV networks' use of Twitter to promote on-air broadcast programs and found that tweets containing positive socioemotional messages were retweeted most frequently, indicating Twitter can be employed to build relationships between fans of television shows and their stars. Wu and colleagues (2011) examined the two-step flow theory on Twitter and found that information flows from elite users of Twitter, such as celebrities, to their followers. Teevan, Ramage, and Morris (2011) found a high prevalence of queries about celebrities on Twitter, driven by fans' desire for timely information about these celebrities. Cha and colleagues (2010) also found that celebrities are most often followed, mentioned, and retweeted on Twitter, attesting to their social influence among fans.

Acknowledging the aforementioned novelty and importance of celebrity-generated brand messages embedded in social media, this research tested the effects of celebrities' Twitter-based eWoM on consumers' perceptions of source credibility, intention to spread eWoM, brand-related outcomes, online bridging social capital, and social identification with celebrities. To this end, two experiments examined the interplay among the valence (negative versus positive) of celebrities' tweets about a brand, the number of followers the celebrity has, and the type (antisocial versus prosocial) of celebrity endorsing the brand. Experiment 1 focused on the effect of a celebrity's social network size (i.e., high versus low number of Twitter followers) and the valence of celebrity-generated tweets (i.e., positive versus negative brand message) on source credibility (hypothesis 1), intention to build an online friendship (hypothesis 2), product involvement/buying intention (hypothesis 3), and intention to spread eWoM (hypothesis 4). Experiment 2, meanwhile, examined consumers' reactions to, and relationships with, celebrities, focusing on the effect of the celebrity's social network size (i.e., high versus low number of Twitter followers) and celebrity type (i.e., prosocial versus antisocial) on source credibility (hypothesis 5), intention to build an online friendship (hypothesis 6), and social identification (hypothesis 7), as well as the mediating role of social identification on the relationship between celebrity type and postexposure buying intention (hypothesis 8). Together, the two experiments aimed to find out whether Twitter could be a viable marketing communication vehicle for celebrity eWoM regarding brands.

EXPERIMENT 1

Overview

Although scholars have recently explored Twitter's potential for brand communication (e.g., content analysis conducted by Lin and Pena 2011) and as a tool for eWoM (e.g., case study conducted by Jansen et al. 2009), there is a dearth of experimental research examining the causal relationship between unique features of Twitter-based eWoM and resultant marketing outcomes. To address this gap, Experiment 1 examined the effect of the number of Twitter followers and the valence of celebrity-generated brand tweets on consumers' source credibility perception, intention to build an online friendship with the celebrity endorser, postexposure product involvement, buying intention, and intention to engage in eWoM.

Theories and Hypotheses

Source credibility refers to "a communicator's positive characteristics that affect the receiver's acceptance of a message" (Ohanian 1990, p. 41). Online popularity is an important predictor of social media users' source credibility. The system-generated number of a profile owner's contacts influences popularity ratings (Utz 2010). Tong and colleagues (2008) characterized the sum of the number of one's friends in social networking sites (SNSs) as "a feature displayed on users' profiles as a vestige of the friend connections a user has accrued" (p. 531). Although online popularity has multiple connotations, including "wide acceptance by peer group members" (Bukowski and Hoza 1989) and "social dominance" (Parkhurst and Hopmeyer 1998), the number of friends profile owners have on their SNSs has been one of the most frequently used indicators to gauge online popularity (Utz 2010) and subsequent social influence in SNS environments (Zywica and Danowski 2008).

Online popularity and social influence can be gauged through multiple sources. Computer-mediated communication (CMC) scholars (e.g., Tong et al. 2008; Utz 2010) have identified three sources of information or cues that SNS profiles contain: self, other, and system. By applying these cues to Twitter, (1) *self-generated information* on Twitter can be operationally defined as a Twitter account owner's tweets; (2) *other-generated information* can be operationally defined as followers' retweets and reply messages; and (3) *system-generated information* (or system-aggregated index of user input, including the number of tweets, the number of followers, and the number of lists) can be operationally defined as quantitative indicators of popularity or social influence.

As previously discussed, social capital is a pool of such tangible resources as trust and reciprocity accumulated by individuals through their social interactions; such interactions have been greatly facilitated by the advent of the Internet, particularly social media sites (Ellison, Steinfield, and Lampe 2007; Williams 2006). There are two major types of social capital: bridging and bonding (Putnam 2000). Bridging social capital consists of loose social connections that provide access to new information and resources, similar to Granovetter's (1973) notion of weak ties; while bonding social capital are strong, trusting relationships within social groups. Scholarly examinations of online social capital thus far have found that quantitative indicators of social influence, such as number of friend connections and followers, can be effective cues for gauging one's social resources. In her experimental research, Utz (2010) empirically demonstrated that SNS users with many friends are judged to be more popular and socially attractive than those with fewer friends. Similarly, Tong and colleagues (2008) found a significant relationship between the number of friends one has on Facebook and his or her perceived social attractiveness. As such, the number of Twitter followers a celebrity has can be seen as a type of cue used by consumers to gauge the celebrity's trustworthiness and credibility. Drawing upon Petty, Cacioppo, and Schumann's (1983) elaboration likelihood model, the number of followers can also be seen as a peripheral cue used by consumers for information processing under low-involvement, low-knowledge, or low-ability conditions. When a celebrity has a larger number of followers, he or she can be judged as having greater bridging social capital, and so consumers who view this information may see the celebrity as being more attractive, trustworthy, and competent. No prior research has examined the causal relationship between the number of followers on Twitter and the three dimensions of source credibility (physical attraction, trustworthiness, and competence) in the context of celebrities' microblogging sites. To address this gap, we proposed the following:

> **H1**: A celebrity with a higher number of followers will be perceived as higher in three dimensions of source credibility (physical attraction, trustworthiness, and competence) than a celebrity with a lower number of followers.

In addition to the causal relationship between online popularity and source credibility perception, this research proposed a second hypothesis, this time concerning the relationship between online popularity and consumers' behavioral intention to build online friendships with celebrities on Twitter. In their examination of Facebook use by college students, Ellison, Steinfield, and Lampe (2007) found that intensive use of Facebook helps people maintain connections with existing social networks (bonding social capital) while simultaneously empowering them to build a large network of new acquaintances (bridging social capital). Building online friendships with celebrities can be considered an effort to construct bridging social capital. When celebrities have large numbers of followers, they are perceived as having greater bridging social capital and, as such, consumers are more likely to want to connect with them and tap into their social capital resources. Thus we propose that system-generated information (quantitative indicators of online popularity) will affect users' intention to build online friendships with celebrities:

> **H2**: A celebrity with a higher number of followers will have a stronger social influence on a consumer's intention to build an online friendship with the celebrity than a celebrity with a lower number of followers.

Besides the main effect of the celebrity's social network size on source credibility (hypothesis 1) and intention to build an online friendship (hypothesis 2), we examined the interaction effect between the celebrity's social network size and valence of the celebrity-generated eWoM about brands on product involvement and buying intention. As Tripp, Jensen, and Carlson (1994) found, a celebrity's perceived credibility is positively related to a consumer's attitudes toward an ad and purchase intention. When celebrities endorse too many products, perceived credibility and attitude toward the ad become less favorable. When celebrities are involved in negative events, their level of blameworthiness also influences consumers' perceptions of source credibility, thereby impacting attitudes toward ads (Louie and Obermiller 2002). Based on these prior studies, we propose that the main effect of valence on advertising outcomes can be moderated by a celebrity's perceived credibility based, in this study, on a boundary condition: a minimum level of trustworthiness, expertise, and likeability, as suggested by a substantial number of Twitter followers. When a celebrity has a low number of followers (i.e., low online bridging social capital), he or she is not seen as a credible source of information and, as such, the valence of his or her eWoM about brands may not have a significant effect on consumers' own product involvement and buying intention. In contrast, when the celebrity has a large number of followers (i.e., high online bridging social capital), he or she is perceived as a more credible social resource; as such, positive eWoM generated by the celebrity about brands may result in greater product involvement and buying intention than negative eWoM. In other words, positive brand-related tweets from celebrities with large numbers of followers would result in the greatest brand-related outcomes on consumers. We therefore hypothesized an interaction effect between the number of followers and the valence of the celebrity's brand-related tweets on product involvement (hypothesis 3a) and buying intention (hypothesis 3b):

> **H3**: The number of Twitter followers that a celebrity has will interact with the valence of the celebrity's tweets about a brand in influencing consumers' (a) product involvement and (b) buying intention. When the number of followers is low, the valence will not have a significant effect. In contrast, when the number of followers is high, positively valenced brand tweets will result in greater product involvement and buying intention than negatively valenced brand tweets.

We further examined the interaction effect of the number of followers and valence of brand tweets on consumers' intention to spread eWoM about the brand. Jansen and colleagues (2009)

viewed Twitter as an emerging form of eWoM that offers major implications for advertising strategy. Online forwarding/passing behavior in eWoM facilitates information flow in interactive marketing. Acknowledging the importance of "opinion-passing behavior" in eWoM, Norman and Russell (2006) examined the "pass-along effect" online and found that social network size and self-interest are positive predictors of people's intention to pass along eWoM. Building on the main effect of social network size on consumers' intention to spread eWoM, we further proposed an interaction effect between the number of followers and the valence of celebrity-generated brand tweets. Compared to product involvement and buying intention, intention to spread eWoM is more active (i.e., action-oriented more than attitude-oriented), other-profitable (i.e., benefiting other consumers more than self), and persuasive (i.e., influencing others more than being persuaded by others) behavior. When the celebrity has a large number of followers (high bridging social capital), consumers may deem it unnecessary to spread eWoM about the tweeted brand regardless of the valence of tweets, as the information is likely to have already reached the large number of people who are Twitter followers of the celebrity. In contrast, when the celebrity has a low number of followers (low bridging social capital), consumers may be more motivated to inform others about the brand tweet, particularly when the brand in question is important to them, thereby engaging in active and persuasive opinion-passing behavior. Intention to spread eWoM when the celebrity's social network is small may depend on the valence of the celebrity's brand tweets. In particular, we predicted a stronger effect for negatively valenced messages. Negative WoM, referring to interpersonal communication concerning a marketing organization or product that denigrates the object of communication (Weinberger, Allen, and Dillon 1981), has a more powerful influence on consumers' brand evaluation than positive WoM because (1) positive information is self-serving, whereas negative information is diagnostic (Herr, Kardes, and Kim 1991); (2) consumers feel higher motivation and obligation to spread negative eWoM to alert other consumers (Laczniak, DeCarlo, and Ramaswami 2001); and (3) consumers are more likely to trust negative eWoM (Pan and Chiou 2011). Consumers would therefore be most motivated to spread eWoM about a brand to other people in their social networks when the celebrity has a small network size (low bridging social capital) and when the celebrity's brand tweets are negative. Hence, we hypothesized an interaction effect between the number of followers and the valence of the celebrity's tweets on intention to spread eWoM:

> **H4**: The number of Twitter followers that a celebrity has will interact with the valence of the celebrity's tweets about a brand in influencing consumers' intention to spread eWoM. When the number of followers is high, the valence will not have a significant effect. In contrast, when the number of followers is low, negatively valenced brand tweets will result in greater intention to spread eWoM than positively valenced brand tweets.

Method

Participants and design. Participants were recruited from communication undergraduates at a major university on the East Coast of the United States. There was no monetary compensation, but students were offered course credit for participation. A total of 160 undergraduates participated in Experiment 1 ($N = 160$; 88 females and 72 males; $M_{Age} = 20.04$, $SD_{Age} = 1.00$; 71.9% White, 12.5% Asian/Pacific Islander, 6.9% African-American/Black, 5% Latino, 0.6% Middle Eastern, 1.3% Mixed, and 1.9% Other). A 2 (product: water [Bling H2O] versus vodka [Oval vodka]) × 2 (valence of tweets: positive versus negative) × 2 (the number of followers: high versus low) between-subjects factorial design experiment ($N = 160$) was conducted to test the main effects and possible interaction effects of the product type, the valence of the tweets, and the number of followers on a male celebrity's (David Kerr) Twitter page. We developed eight different types of manipulation stimuli and an accompanying online questionnaire. Each participant was randomly assigned to one of the eight conditions by being asked to view a celebrity's Twitter page with brand-related tweets about either Bling H2O or Oval vodka and then fill out a questionnaire. No participant had any prior experience with Bling H2O or Oval vodka.

Manipulation stimuli. We created Twitter pages for a semi-fictitious celebrity (dubbed David Kerr, using photos of an actual fashion model but with a pseudonym) to maximize internal validity. The celebrity's persona and characteristics were based on that of various actual, real-life celebrities. We also used two different low-involvement products, Bling H2O and Oval vodka, which are endorsed by the celebrities on their Twitter pages. They are both real brands that differ in their product orientations. Bling H2O, a type of mineral water, is more health oriented and utilitarian, while Oval vodka, a premium luxury alcohol brand, is more hedonistic and associated with nightclubs and binge drinking. In creating eight different versions of manipulation stimuli (four for each product), we designed product information incorporating the three types of endorsement (McCracken 1989; Miller and Laczniak 2011): explicit endorsement ("I recommend this product"), implicit endorsement ("I use this product"), and copresent endorsement ("I merely appear with this product"). We manipulated the number of followers based on actual celebrities' Twitter pages (e.g., Lady Gaga as an exemplar of a popular celebrity with a high number of Twitter followers). Figure 1 presents example snapshots of the manipulation materials.

Dependent measures. Source credibility was measured by Ohanian's (1990) 15 items with 7-point semantic differential scales (Cronbach's $\alpha_{\text{Physical Attraction}} = .86$; Cronbach's $\alpha_{\text{Trustworthiness}} = .92$; Cronbach's $\alpha_{\text{Competence}} = .89$). Intention to build an online friendship with the celebrity was measured by eight items with 7-point Likert scales ranging from *Strongly disagree* = 1 to *Strongly agree* = 7: The eight items consist of the following: (1) four "social attraction dimension" items of McCroskey and McCain's (1974) interpersonal attraction scale

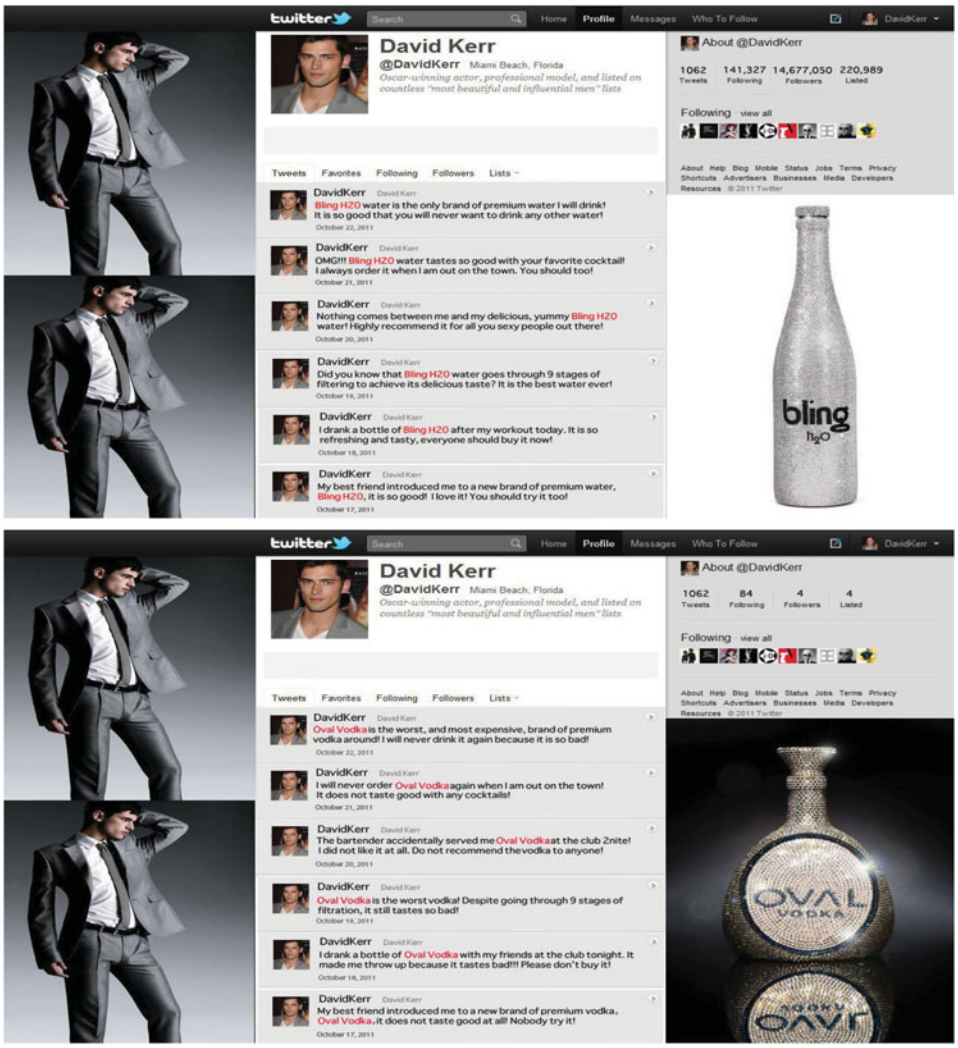


FIG. 1. Example manipulation stimuli (number of Twitter followers and valence of brand tweets). Top: Male celebrity's high number of followers and Bling H2O positive brand tweets. Bottom: Male celebrity's low number of followers and Oval vodka negative brand tweets. Experiment 1 had a total of eight conditions (four conditions for each product category): Condition 1 (a) Bling H2O; (b) Oval vodka: high number of followers × positive tweet; Condition 2 (a) Bling H2O; (b) Oval vodka: high number of followers × negative tweet; Condition 3 (a) Bling H2O; (b) Oval vodka: low number of followers × positive tweet; Condition 4 (a) Bling H2O; (b) Oval vodka: low number of followers × negative tweet. (Color figure available online).

("I think David Kerr could be my Twitter Friend"; "David Kerr would fit into my circle of online friends"; "I think David Kerr and I could establish an online friendship"; "I would like to have a friendly online chat with him") and (2) four additional, newly developed items to measure intention to build a Twitter-based friendship ("I would like to follow him on Twitter"; "I would like him to follow me on Twitter"; "I would like to retweet his tweets"; and "I would like him to retweet my tweets") (Cronbach's $\alpha_{\text{Bling H2O}} = .89$; Cronbach's $\alpha_{\text{Oval Vodka}} = .89$). Product involvement was measured by Zaichkowsky's (1985) ten items with 7-point semantic differential scales (Cronbach's $\alpha_{\text{Bling H2O}} = .94$; Cronbach's $\alpha_{\text{Oval Vodka}} = .95$). Buying intention was measured by Holzwarth, Janiszewski, and Neumann's (2006) three items with 7-point Likert scales (Cronbach's $\alpha_{\text{Bling H2O}} = .91$; Cronbach's $\alpha_{\text{Oval Vodka}} = .90$). Intention to spread eWoM was measured by four newly developed items using 7-point Likert scales. The stability of the one dimension was assessed and validated using confirmatory factor analyses and principal components analyses. Scale dimensionality, internal consistency, and validity were offered over two samples (160 undergraduates from a university on the East Coast of the United States; 303 U.S. undergraduates from a Southeastern university): "I am interested in sharing this product review with my Twitter friends"; "I am interested in sharing my experience with this product's advertisement with my Twitter friends"; "I am willing to spread David Kerr's product review via my Twitter page"; and "I am willing to retweet David Kerr's product review tweets" (Cronbach's $\alpha_{\text{Bling H2O}} = .94$; Cronbach's $\alpha_{\text{Oval Vodka}} = .89$).

Results

Manipulation checks. Items for manipulation checks measured participants' correct perception of the number of Twitter followers and the valence of Tweet-based brand messages with dichotomous (*True/False*) scales. With regard to the number of followers and popularity, out of 78 participants in the low-number-of-followers' condition, 75 participants (96.2%), 76 participants (97.4%), 75 participants (96.2%), and 75 participants (96.2%) respectively answered *True* to these four statements, in the corresponding order: "David Kerr has only a few followers in Twitter"; "Only a few people list David Kerr in Twitter"; "The number of David Kerr's followers is low"; and "The number of David Kerr's lists is low." Furthermore, 76 participants (97.4%) answered *False* to the last statement: "Based on the number of followers, David Kerr is popular in Twitter." Out of 82 participants in the high-number-of-followers' condition, 80 participants (97.6%), 82 participants (100%), 82 participants (100%), and 81 participants (98.8%) respectively answered *True* to these four statements: "David Kerr has many followers in Twitter"; "Many people list David Kerr in Twitter"; "The number of David Kerr's followers is high"; and "The number of David Kerr's lists is high." Furthermore, 82 participants (100%) answered *True* to the last statement: "Based on the number of followers, David Kerr is popular in Twitter." Thus, the manipulation of the number of followers (low versus high; unpopular versus popular) was successful. With regard to the valence of Tweet-based brand messages, out of 80 participants in the negative-brand-tweets condition, 76 participants (95%) chose "David Kerr does not recommend this product." Out of 80 participants in the positive-brand-tweets condition, 79 participants (98.8%) chose "David Kerr recommends this product." Furthermore, a between-subjects independent samples t test demonstrated that participants in the positive-brand-tweets condition perceived David Kerr's product rating (on a 7-point rating scale ranging from *Negative* = 1 to *Positive* = 7) to be higher ($M = 6.48$, $SD = 1.30$) than those participants in the negative brand tweets condition ($M = 1.21$, $SD = 1.00$), $t = 28.64$, $p < .001$, confidence interval: 4.90 (lower) and 5.63 (upper). Thus, the manipulation of the valence of brand tweets was successful.

Main effects of number of Twitter followers. Three-way ANOVAs indicated the main effect of the number of Twitter followers on physical attraction, F (1, 152) = 6.78, $p < .05$, $\eta^2 = .04$, power = 73.5% (high followers $M = 5.93$, $SD = 1.05$; low followers $M = 5.49$, $SD = 1.02$), trustworthiness, F (1, 152) = 5.24, $p < .05$, $\eta^2 = .03$, power = 62.3% (high followers $M = 4.02$, $SD = 1.06$; low followers $M = 3.63$, $SD = 1.02$), and competence, F (1, 152) = 10.11, $p < .01$, $\eta^2 = .06$, power = 88.5% (high followers $M = 4.03$, $SD = 1.09$; low followers $M = 3.45$, $SD = 1.13$) as well as consumers' intention to build an online friendship with the celebrity endorser, F (1, 152) = 10.55, $p < .01$, $\eta^2 = .07$, power = 89.7% (high followers $M = 2.95$, $SD = 1.30$; low followers $M = 2.40$, $SD = 1.13$), thus supporting hypotheses 1 and 2. The results indicated no main effect of the product type, no main effect of tweet valence, no two-way interaction effect, and no three-way interaction effect on these dependent variables.

Interaction effects. Three-way ANOVAs indicated a significant two-way interaction effect between the number of followers and the valence of the brand tweets endorsed (positive) or refuted (negative) by the celebrity on postexposure product involvement, F (1, 152) = 4.42, $p < .05$, $\eta^2 = .03$, observed power = 55.1%, buying intention, F (1, 152) = 15.41, $p < .001$, $\eta^2 = .09$, observed power = 97.4%, and intention to spread eWoM, F (1, 152) = 4.64, $p < .05$, $\eta^2 = .03$, observed power = 57.1%, thus supporting hypotheses 3a, 3b, and 4. When the number of followers was high, exposure to the positively valenced tweets about Bling H2O resulted in greater product involvement ($t = 2.40$, $p < .05$, $M_{3a} = 3.92$, $SD_{3a} = 1.36$) and greater buying intention ($t = 4.04$, $p < .001$, $M_{3b} = 3.39$, $SD_{3b} = 1.78$) than exposure to the negatively valenced brand tweets ($M_{3a} = 2.87$, $SD_{3a} = 1.20$; $M_{3b} = 1.45$, $SD_{3b} = .87$, respectively). In contrast, when the number of followers was low, the valence of the brand tweets did not have a significant effect on product involvement ($t = .40$, $p = .69$, n.s., Figure 2 top left) and buying intention ($t = -.24$, $p = .81$, n.s., Figure 2, middle left), thus supporting hypotheses 3a and 3b. For eWoM, consumers indicated a stronger intention to spread eWoM when celebrities with a lower number of followers posted negatively valenced information ($M_{3c} = 1.72$, $SD_{3c} = 1.46$) than positively valenced information ($M_{3c} = 1.16$, $SD_{3c} = .32$) ($t = 1.50$, $p < .10$, marginally significant, Figure 2, bottom left). In contrast, when the number of followers was high, the valence of the brand tweets did not have a significant effect on intention to spread eWoM ($t = .11$, $p = .92$, n.s., $M_{3c} = 1.87$, $SD_{3c} = 1.42$; $M_{3c} = 1.82$, $SD_{3c} = 1.00$), thus supporting hypothesis 4.

A similar pattern was found for Oval vodka. When the number of followers was high, exposure to the positively valenced brand tweets about Oval vodka resulted in greater product involvement ($t = 2.24$, $p < .05$, $M_{3a} = 4.44$, $SD_{3a} = 1.209$) and greater buying intention ($t = 2.81$, $p < .01$, $M_{3b} = 3.30$, $SD_{3b} = 1.37$) than exposure to the negatively valenced brand tweets ($M_{3a} = 3.55$, $SD_{3a} = 1.49$; $M_{3b} = 2.24$, $SD_{3b} = .1.26$, respectively). In contrast, when the number of followers was low, the valence of the brand tweets did not have a significant effect on product involvement ($t = .68$, $p = .50$, n.s., Figure 2, top right) and buying intention ($t = -.74$, $p = .46$, n.s., Figure 2, middle right), thus supporting hypotheses 3a and 3b. For eWoM, consumers indicated a stronger intention to spread eWoM when celebrities with a lower number of followers posted negatively valenced information ($t = 2.28$, $p < .05$, $M_{3c} = 1.94$, $SD_{3c} = 1.26$) than positively valenced information ($M_{3c} = 1.29$, $SD_{3c} = .56$) (Figure 2, bottom right). In contrast, when the number of followers was high, the valence of the brand tweets did not have a significant effect on intention to spread eWoM ($t = -.95$, $p = .35$, n.s., $M_{3c} = 1.19$, $SD_{3c} = .36$; $M_{3c} = 1.37$, $SD_{3c} = .87$),

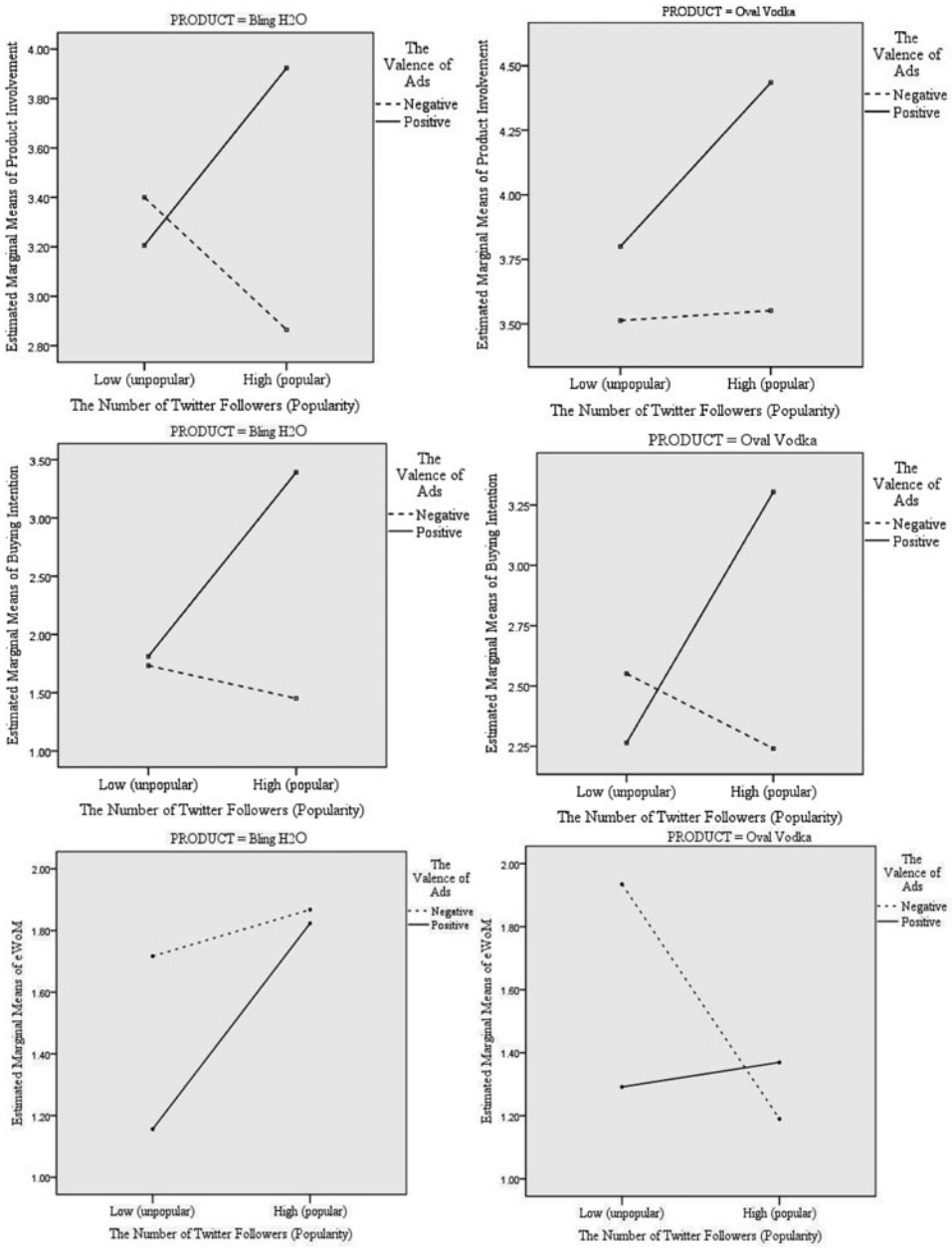


FIG. 2. The interaction of number of Twitter followers and valence of brand tweets.

thus supporting hypothesis 4. The results indicated no main effect of the product type and no other interaction effects. Figure 2 presents the significant two-way interaction for each product (Bling H2O on the left; Oval vodka on the right).

Brief Discussion

Experiment 1 demonstrates that the number of followers (system-generated information) influences consumers' perceived credibility of a celebrity and their intention to build an online friendship with that celebrity. More importantly, results provide empirical evidence supporting the interaction between the system-aggregated indicators of user input (i.e., the number of Twitter followers) and self-generated information (Twitter account owners' tweets) on product involvement, buying intention, and intention to pass along eWoM. However, the interaction demonstrated two different patterns. For product involvement and buying intention, celebrities with a low number of followers did not have a significant social influence on consumers (Figure 2, top and middle). In contrast, for eWoM, consumers indicated a stronger intention to spread eWoM when celebrities with a lower number of followers posted negatively valenced information (Figure 2, bottom). This finding is interesting and

significant, as it implies that consumers are more likely to spread important negative product information to other people in their electronic social networks when the celebrity has a low number of followers (Figure 2, bottom right). In other words, consumers may deem it unnecessary to pass along negative information when the celebrity already has a high number of followers. Consumers' reasonable discretion to weigh the importance and necessity to pass along brand information is encouraging data. These data speak to the potential of microblogging sites as a useful platform through which consumers can construct bridging social capital (pass along celebrities' tweets) and bonding social capital (to their close friends) in the consumer-generated interactive advertising context.

Because Experiment 1 indicates that product type does not have a significant effect on the dependent variables, it can be assumed that the manipulation of product type had an equivalent influence on consumer evaluation. Therefore, Experiment 2 used only one product. Furthermore, in Experiment 1, gender matching was not controlled, and thus Experiment 2 addressed this issue.

EXPERIMENT 2

Overview

Shifting gears to consumers' reaction to and relationship with celebrities, Experiment 2 focused on interpersonal communication aspects of celebrity-generated eWoM. Negative information about celebrities may negatively impact endorsed brands (Erdogan and Baker 2000; Louie and Obermiller 2002). According to a report by Carnegie Mellon's Tepper School of Business, Nike lost more than $1.7 million in sales and nearly 105,000 customers when its spokesmodel, Tiger Woods, was involved in 2009 in an adultery scandal (Chung, Derdenger, and Srinivasan 2012, 2010). When Kobe Bryant was charged with sexual assault, McDonald's dissolved their relationship with him, implying their fear of potential damage to the brand image. White, Goddard, and Wilbur (2009) demonstrated that consumers exposed to negative information about a celebrity endorser then viewed the advertised product more negatively. Thus, the type of celebrity (e.g., prosocial versus antisocial) is an integral factor to consider. In line with this theoretical thinking, we conducted Experiment 2, which manipulated two types of celebrity narratives (prosocial versus antisocial), linking them to consumers' cognitive perceptions about the celebrity and related brand outcomes.

Theories and Hypotheses

According to Kozinets and colleagues (2010), "WoM marketing operates through a complex process that transforms commercial information into cultural stories relevant to the members of particular communities" (p. 86). Marketers employing social media encounter the challenge of networked coproduction of narratives (referring to "network coproduction of marketing messages and meanings through consumer-generated narratives," Kozinets et al. 2010, p. 86) as news organizations increasingly use Twitter to post and receive updates (Jansen et al. 2009). In this integrated media environment where consumers read and pass along news stories via multiple media channels, it is worth examining the influence of consumers' preexposure to online news stories about celebrities on consumers' subsequent exposure to celebrities' tweet-based eWoM. In their study of celebrity endorsers involved with negative events, Louie and Obermiller (2002) found that companies fared best when dismissing endorsers with high blameworthiness while keeping endorsers with low blameworthiness, but fared worst when rejecting those with moderate blameworthiness. Companies' stock market reactions were negatively related to endorser blameworthiness; the greatest losses in stock market value were expressed when celebrity endorsers were most culpable (Louie, Kulik, and Jacobson 2001). This theoretical thinking guided the formation of the following hypothesis about the influence of consumers' pre-Twitter exposure to narratives about celebrities on their post-Twitter source credibility perception:

> **H5**: Consumers who read a news story about a celebrity's prosocial behaviors before visiting the celebrity's Twitter page will perceive the celebrity as higher in source credibility than those who read a news story about a celebrity's antisocial behaviors.

Social identity theory (Tajfel and Turner 1986) defines social identity as the part of an individual's self-concept deriving from knowledge of his or her membership in a social group, together with the emotional and value-related significance attached to that membership. When one identifies socially with an individual or group, the psychological separation between the self and others disappears, resulting in the view of oneself as an interchangeable exemplar of one's social group (Aron, Aron, and Smollan 1992). When one identifies highly with a celebrity, the illusion of interactivity is created, making it easier for the celebrity to exert a social influence on the fan (Rubin, Perse, and Powell 1985). Celebrities develop a persona through the types of roles they play in society and how they are portrayed in the media (Amos, Holmes, and Strutton 2008) and can add value to a company, brand, or product through the process of meaning transfer (McCracken 1989). When a celebrity endorses a product, the meaning developed around the celebrity transfers to the company, brand, or product (Erdogan and Baker 2000; Louie and Obermiller 2002). Building on this meaning transfer process, consumers may or may not identify with the celebrity and subsequently the represented company, brand, or product. According to Kelman (2006), "Identification occurs when an individual accepts influence from another person or group in order to establish or maintain satisfying self-defining relationship to the other" (pp. 3–4). Information exchange is more likely to occur among people who share some qualities (Rogers 1995). Therefore, it can be reasonably hypothesized that consumers will show a stronger intention to build an online friendship and to identify with a prosocial celebrity versus an antisocial celebrity:

H6: Consumers who read a news story about a celebrity's prosocial behaviors before visiting the celebrity's Twitter page will have a stronger (a) intention to build an online friendship with the celebrity and (b) social identification with the celebrity than those who read a news story about a celebrity's antisocial behaviors.

According to social identity theory, people are intrinsically motivated to achieve positive distinctiveness, and this is done by socially identifying with individuals or groups that help to improve their own self-concepts (Tajfel and Turner 1986). As previous research found, sociometric popularity in SNSs has a positive relationship with perceived social attractiveness (Tong et al. 2008; Utz 2010). Celebrities with higher numbers of followers can be seen as more credible brand endorsers and also as having greater online bridging social capital, or perceived access to social resources. At the same time, prosocial celebrities (i.e., those exhibiting socially desirable public behavior) may also be seen as more positive role models who can aid in improving their followers' own self-images. Hence, following prosocial celebrities with high numbers of followers on Twitter can be a strategy allowing individuals to raise their self-concepts, thereby helping them achieve positive distinctiveness. We thus proposed an interaction effect between the number of followers and the type of celebrity on social identification:

H7: The number of Twitter followers that a celebrity has will interact with the type of celebrity in influencing consumers' social identification with the celebrity. When the celebrity is prosocial, a high number of followers will result in greater social identification. In contrast, when the celebrity is antisocial, the number of followers will not have a significant effect.

The current research also proposed an important mediating effect of consumers' social identification with the celebrity on the relationship between celebrity type (prosocial versus antisocial) and consumers' postexposure buying intention. Kelman (1961) theorized identification as one of the processes of persuasion that occurs through actual or perceived relationships in which an individual "attempts to be like or actually be the other person" (p. 63). This process is illustrated by celebrity fans who wish to "be like Elvis" or "be like J-Lo." Driven by the theory of celebrity identification, Fraser and Brown (2002) indicated that fans develop a strong identification with celebrities by consciously role-modeling their values and changing their own lifestyles to emulate the celebrities. Basil (1996) indicated that identification with a celebrity mediates adoption of attitudinal and behavioral positions advocated by the celebrity. Louie and Obermiller (2002) found that celebrity endorsers involved in negative public events significantly impact consumers' perceptions of brands. Ultimately, identification with a celebrity leads media consumers to emulate the celebrity's perceived values and behavior, thus mediating the celebrity's influence on consumer behavior. Drawing on these theoretical foundations, the following hypothesis proposed that social identification with a celebrity endorser plays a mediating role in determining the effect of celebrity type on consumers' buying intention:

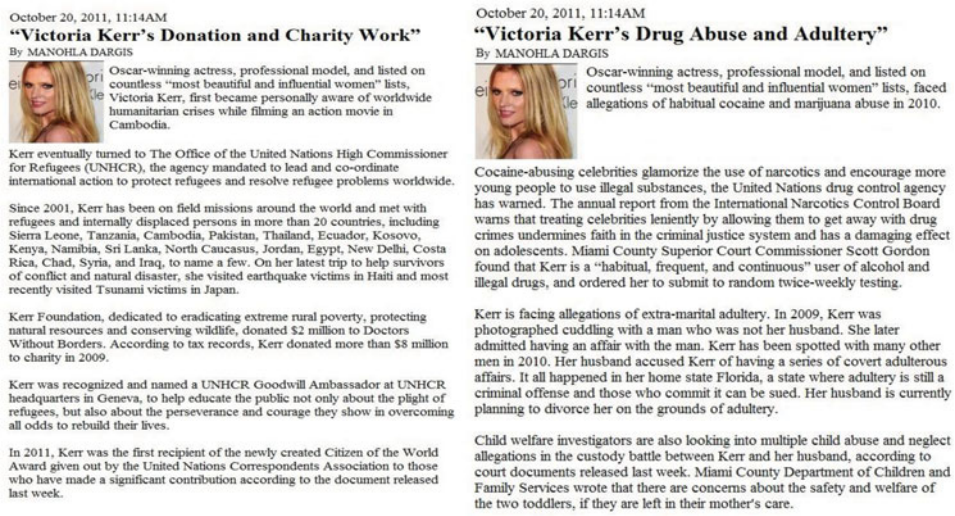
H8: Consumers' social identification with a celebrity will mediate the relationship between celebrity type (prosocial versus antisocial) and postexposure buying intention.

Method

Data collection. Data of Experiment 2 consisted of two subdata: (1) 77 female participants in a gender-matched, positive-brand-tweet condition, and (2) 80 female participants in a gender-matched, negative-brand-tweet condition. These divisions were based on the following rationale: First, Experiment 1 already demonstrated the interaction between the number of followers and the valence of brand tweets. Therefore, it is reasonable to focus on the interaction between the number of followers and celebrity type, thus justifying a 2 (number of followers: high versus low) × 2 (celebrity type: prosocial versus antisocial) factorial design experiment for each valence (positive versus negative brand messages). Second, to address the limitation of Experiment 1 regarding gender-matched and mismatched participants, Experiment 2 attempted to match the gender of participants to the gender of celebrities. To this end, we matched the gender of participants (female participants) to the gender of the celebrity (female celebrity Victoria Kerr).

Participants and design. Participants were recruited from undergraduates in introductory advertising classes at a major university in the Southeastern United States. There was no monetary compensation, but students were offered course credit for participation. Volunteers who participated in Experiment 1 were excluded from the recruitment process. Under the exclusion criterion, 157 female participants were randomly assigned to one of the two subdata collections. For subdata 1 (gender-matched female celebrity's positive brand tweets), we conducted a 2 (number of followers: high versus low) × 2 (celebrity type: prosocial versus antisocial) between-subjects factorial design experiment ($N = 77$, $M_{Age} = 20.22$, $SD_{Age} = 1.13$; 83.1% White, 3.9% Asian/Pacific Islander, 1.3% South Asian, 7.8% African-American/Black, 2.6% mixed, and 1.3% other). For subdata 2 (gender-matched female celebrity's negative brand tweets), we conducted a 2 (number of followers: high versus low) × 2 (celebrity type: prosocial versus antisocial) between-subjects factorial design experiment ($N = 80$, $M_{Age} = 20.01$, $SD_{Age} = 1.28$; 81.3% White, 8.8% Asian/Pacific Islander, 6.3% African-American/Black, 2.5% Latino, 1.3 % mixed).

Manipulation stimuli. We developed eight different versions of manipulation stimuli. Celebrity type was manipulated by exposing participants to a *New York Times*–style article with a narrative about either a prosocial celebrity or an antisocial celebrity. In the prosocial celebrity conditions, the narrative described the celebrity's philanthropic work and charitable donations; in the antisocial celebrity conditions, the narrative described the celebrity's involvement with drug abuse and adultery. Valence of brand tweets and the number of followers were manipulated in the same fashion as Experiment 1. Figure 3 presents two different versions of narratives (prosocial celebrity on the left; antisocial celebrity on the right). Participants were



October 20, 2011, 11:14AM

"Victoria Kerr's Donation and Charity Work"

By MANOHLA DARGIS

Oscar-winning actress, professional model, and listed on countless "most beautiful and influential women" lists, Victoria Kerr, first became personally aware of worldwide humanitarian crises while filming an action movie in Cambodia.

Kerr eventually turned to The Office of the United Nations High Commissioner for Refugees (UNHCR), the agency mandated to lead and co-ordinate international action to protect refugees and resolve refugee problems worldwide.

Since 2001, Kerr has been on field missions around the world and met with refugees and internally displaced persons in more than 20 countries, including Sierra Leone, Tanzania, Cambodia, Pakistan, Thailand, Ecuador, Kosovo, Kenya, Namibia, Sri Lanka, North Caucasus, Jordan, Egypt, New Delhi, Costa Rica, Chad, Syria, and Iraq, to name a few. On her latest trip to help survivors of conflict and natural disaster, she visited earthquake victims in Haiti and most recently visited Tsunami victims in Japan.

Kerr Foundation, dedicated to eradicating extreme rural poverty, protecting natural resources and conserving wildlife, donated $2 million to Doctors Without Borders. According to tax records, Kerr donated more than $8 million to charity in 2009.

Kerr was recognized and named a UNHCR Goodwill Ambassador at UNHCR headquarters in Geneva, to help educate the public not only about the plight of refugees, but also about the perseverance and courage they show in overcoming all odds to rebuild their lives.

In 2011, Kerr was the first recipient of the newly created Citizen of the World Award given out by the United Nations Correspondents Association to those who have made a significant contribution according to the document released last week.

October 20, 2011, 11:14AM

"Victoria Kerr's Drug Abuse and Adultery"

By MANOHLA DARGIS

Oscar-winning actress, professional model, and listed on countless "most beautiful and influential women" lists, faced allegations of habitual cocaine and marijuana abuse in 2010.

Cocaine-abusing celebrities glamorize the use of narcotics and encourage more young people to use illegal substances, the United Nations drug control agency has warned. The annual report from the International Narcotics Control Board warns that treating celebrities leniently by allowing them to get away with drug crimes undermines faith in the criminal justice system and has a damaging effect on adolescents. Miami County Superior Court Commissioner Scott Gordon found that Kerr is a "habitual, frequent, and continuous" user of alcohol and illegal drugs, and ordered her to submit to random twice-weekly testing.

Kerr is facing allegations of extra-marital adultery. In 2009, Kerr was photographed cuddling with a man who was not her husband. She later admitted having an affair with the man. Kerr has been spotted with many other men in 2010. Her husband accused Kerr of having a series of covert adulterous affairs. It all happened in her home state Florida, a state where adultery is still a criminal offense and those who commit it can be sued. Her husband is currently planning to divorce her on the grounds of adultery.

Child welfare investigators are also looking into multiple child abuse and neglect allegations in the custody battle between Kerr and her husband, according to court documents released last week. Miami County Department of Children and Family Services wrote that there are concerns about the safety and welfare of the two toddlers, if they are left in their mother's care.

FIG. 3. Example manipulation stimuli (narratives about prosocial and antisocial celebrities). Narratives about female celebrity's prosocial (left) versus antisocial (right) behaviors. Experiment 2 had a total of eight gender-matched conditions: Condition 1: female prosocial celebrity × high number of followers × positive tweet; Condition 2: female antisocial celebrity × high number of followers × positive tweet; Condition 3: female prosocial celebrity × low number of followers × positive tweet; Condition 4: female antisocial celebrity × low number of followers × positive tweet; Condition 5: female prosocial celebrity × high number of followers × negative tweet; Condition 6: female antisocial celebrity × high number of followers × negative tweet; Condition 7: female prosocial celebrity × low number of followers × negative tweet; Condition 8: female antisocial celebrity × low number of followers × negative tweet. (Color figure available online).

first asked to read the assigned *New York Times*–style article, after which they were prompted to view the celebrity's Twitter page containing brand-related tweets and then fill out an online questionnaire.

Dependent measures. Manipulation checks on the number of Twitter followers *and popularity* were conducted using the same items as those from Experiment 1. Prosocial (versus antisocial) characteristics of the celebrity were measured by an index consisting of eight items with 7-point semantic differential scales: *Bad* = 1 to *Good* = 7; *Antisocial* = 1 to *Prosocial* = 7; *Disrespectable* = 1 to *Respectable* = 7; *Socially unacceptable* = 1 to *Socially desirable* = 7; *Unethical* = 1 to *Ethical* = 7; *Immoral* = 1 to *Moral* = 7; *Disgraceful* = 1 to *Graceful* = 7; and *Dishonorable* = 1 to *Honorable* = 7 (Cronbach's α = .97). Source credibility (Cronbach's $\alpha_{\text{Physical Attraction}}$ = .85; Cronbach's $\alpha_{\text{Trustworthiness}}$ = .97; Cronbach's $\alpha_{\text{Competence}}$ = .91) and intention to build an online friendship with the celebrity (Cronbach's α = .93) were measured by the same items from Experiment 1. Social identification was measured by four questions and one diagram-type item from Aron, Aron, and Smollan's (1992) "Inclusion of Other in the Self (IOS)" scale (Cronbach's $\alpha_{\text{Victoria Kerr (Female Celebrity)}}$ = .90).

Results

*Subdata 1: Gender-Matched Female Celebrity's Positive Brand Tweets (*N = *77)*

Manipulations checks. With regard to the type of celebrity, an independent-samples *t* test demonstrated that participants in the prosocial celebrity conditions perceived the celebrity to have more socially desirable characteristics ($M = 6.11$, $SD = .80$) than those in the antisocial celebrity conditions ($M = 2.38$, $SD = .80$), $t = 40.89$, $p < .001$.

Main effects of type of celebrity. For the positive brand tweets subdata, two-way ANOVAs indicated the main effect of celebrity type on physical attraction, $F(1, 73) = 34.11$, $p < .001$, $\eta^2 = .32$, observed power = 100%, trustworthiness, $F = 117.61$, $p < .001$, $\eta^2 = .62$, observed power = 100%, competence, $F = 29.92$, $p < .001$, $\eta^2 = .29$, observed power = 100%, social identification with the celebrity, $F = 37.19$, $p < .001$, $\eta^2 = .34$, observed power = 100%, and intention to build an online friendship, $F = 15.78$, $p < .001$, $\eta^2 = .18$, observed power = 97.5%, thus supporting hypotheses 5, 6a, and 6b. Participants in the prosocial celebrity conditions perceived the celebrity to be more physically attractive, trustworthy, and competent ($M = 5.70$, $SD = 1.07$; $M = 5.09$, $SD = 1.50$; $M = 4.57$, $SD = 1.38$) as well as indicated greater social identification with the celebrity ($M = 2.67$, $SD = 1.38$) and intention to build an online friendship ($M = 3.11$, $SD = 1.49$) than participants in the antisocial celebrity conditions ($M = 4.32$, $SD = 1.15$; $M = 1.96$, $SD = .96$; $M = 2.96$, $SD = 1.18$; $M = 1.30$, $SD = .58$; $M = 1.94$, $SD = 1.15$, respectively).

Moderating effects. For the positive brand tweets subdata, a two-way ANOVA indicated a significant two-way interaction effect between the number of followers and celebrity type on social identification with the celebrity, $F(1, 73) = 6.99$, $p < .01$, $\eta^2 = .09$, observed power = 74.2%, thus supporting hypothesis 7. When the celebrity was prosocial, a high number of followers resulted in greater social identification ($M = 3.20$, $SD = 1.54$) than exposure to a low number of followers ($M = 2.19$, $SD = 1.05$), $t = 2.39$, $p < .05$. In contrast, when the celebrity was

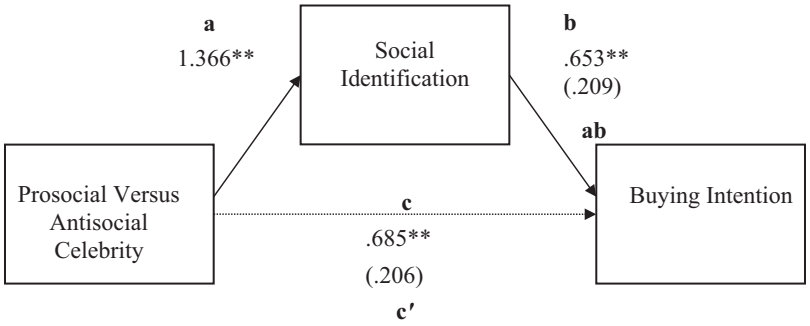


FIG. 4. The mediating effect of social identification. The type of celebrity was dummy-coded: prosocial (1) and antisocial (0). Mediation analysis with bootstrapping procedures: The numbers in the parentheses represent the indirect effect for the mediator (ab path) and the direct effect for the relation of celebrity type to buying intention after accounting for the mediator (c′ path). $^{**}p < .01$.

antisocial, the number of followers did not have a significant effect on social identification ($M = 1.20$, $SD = .47$; $M = 1.40$, $SD = .67$), $t = 1.07$, $p = .29$, n.s.

Mediating effects. We conducted a mediation analysis to test the mediating effect of social identification with the celebrity endorser (hypothesis 8) using Preacher and Hayes' (2008) bootstrapping methodology with 1,000 resamples. For the positive brand tweets subdata, the total model was significant (F (2, 74) $= 15.86, p < .001$), accounting for 30% of the variance in buying intention. Across all samples, the mean estimated indirect effect for the mediational path was computed, as well as the 95% confidence intervals and standard errors for each of these estimates. The bootstrapping at the 95% confidence interval of the indirect effect did *not* contain zero, indicating that social identification significantly mediates the relationship between celebrity type and buying intention (SE = .21, CI = .53 [lower] 1.37 [upper]), as presented in Figure 4, thus supporting hypothesis 8.

*Subdata 2: Gender-Matched Female Celebrity's Negative Brand Tweets (*N = *80)*

Main effects of type of celebrity. For the negative brand tweets subdata, two-way ANOVAs indicated the main effect of the celebrity type on physical attraction, F (1, 76) = 12.74, $p <$ .001, $\eta^2 = .14$, trustworthiness, $F = 89.67$, $p < .001$, $\eta^2 = .54$, competence, $F = 20.73$, $p < .001$, $\eta^2 = .21$, social identification with the celebrity, $F = 42.02$, $p < .001$, $\eta^2 = .36$, and intention to build an online friendship, $F = 10.94$, $p < .001$, $\eta^2 = .13$, thus supporting hypotheses 5, 6a, and 6b. Participants in the prosocial celebrity conditions perceived the celebrity to be more physically attractive, trustworthy, and competent ($M =$ 5.26, $SD = 1.20$; $M = 4.53$, $SD = 1.54$; $M = 4.06$, $SD = 1.36$, respectively) as well as indicated greater social identification with the celebrity ($M = 2.45$, $SD = 1.14$) and intention to build an online friendship ($M = 3.02$, $SD = 1.57$) than those participants in the antisocial celebrity conditions ($M = 4.40$, $SD = 1.03$; $M = 1.89$, $SD = .93$; $M = 2.85$, $SD = 1.09$; $M =$ 1.21, $SD = .50$; $M = 2.03$, $SD = 1.18$, respectively).

No moderation and mediation effect was found for negatively valenced brand tweets. Thus, hypotheses 7 and 8 were not supported.

GENERAL DISCUSSION

Summary of Major Findings

Experiment 1 found that a celebrity endorser with a high number of followers was significantly associated with higher ratings on source credibility compared to a celebrity endorser with a low number of followers (hypothesis 1). Consumers perceived the celebrity with a high number of followers as being more physically attractive, trustworthy, and competent. A high number of followers on the celebrity endorser's profile also significantly increased consumers' intention to build an online friendship with the celebrity (hypothesis 2). These findings suggest that, in line with previous research, system-generated content or system-aggregated quantitative index of user input on a Twitter profile has a strong influence on the profile owner's popularity rating and credibility (Utz 2010). In addition, Experiment 1 found a significant two-way interaction between the number of followers and valence of brand tweets (hypotheses 3 and 4). Consumers who were exposed to positive tweets by the celebrity with a high number of followers showed significantly higher postexposure product involvement (hypothesis 3a) and buying intention (hypothesis 3b). In contrast, for those consumers exposed to the celebrity with a low number of followers, the valence of brand tweets did not have a significant effect on product involvement and buying intention. A different interaction pattern was found for intention to spread eWoM; consumers exposed to negative tweets by the celebrity with a low number of followers showed significantly higher intention to spread eWoM (hypothesis 4). No main effect was found for product type, suggesting that it did not matter what type of product was advertised (Bling H2O or Oval vodka).

In Experiment 2, only one product type (Bling H2O) was used, along with narrative manipulations (prosocial versus antisocial celebrity) and gender matching between celebrity and consumer (both female). A significant main effect was found

for celebrity type. Specifically, the prosocial celebrity was rated higher on source credibility (hypothesis 5). Consumers also reported a significantly higher intention to build an online friendship (hypothesis 6a) and stronger social identification (hypothesis 6b) with the prosocial celebrity. Furthermore, a two-way interaction effect was found between the number of followers and celebrity type (hypothesis 7). When exposed to a prosocial celebrity with a high number of followers, consumers reported significantly higher social identification with the celebrity. Another major finding was that social identification mediated the relationship between celebrity type and postexposure buying intention (hypothesis 8), signifying the importance of consumers' identification with celebrity endorsers in product advertisements. However, it should be noted that consumers' social identification with the celebrity plays a mediating role only under the condition of positive brand tweets but not under the condition of negative brand tweets. This inconsistent finding may be attributed to the null effects of celebrities' negative brand tweets on consumers' buying intentions.

Theoretical and Managerial Implications

The findings of this study have some important theoretical and managerial implications. First, they attest to the potential for celebrity endorsers, particularly those with a high number of followers and prosocial backstories, to promote advertisers' brands and products on Twitter, thereby leveraging microblogging sites as an effective medium for eWoM. Second, because these celebrities are viewed as fellow users of Twitter but simultaneously perceived as being more credible, trustworthy, attractive, and competent than ordinary Twitter users, they are able to provide eWoM regarding brands and products that positively influences their followers' postexposure product involvement, attitudes, and brand loyalty (Campbell et al. 2011; Miller and Laczniak 2011). Third, celebrities can add value for companies through Twitter, transferring the meaning developed around them personally to the endorsed brand or product (Erdogan and Baker 2000; McCracken 1989). Fourth, consistent with previous research on identification (Kelman 2006; Rubin, Perse, and Powell 1985; Tajfel and Turner 1986), Twitter users who identified strongly with a celebrity endorser were socially influenced to a greater extent by the celebrity, with identification mediating the relationship between celebrity type (prosocial versus antisocial) and buying intention. Finally, the findings suggest that on microblogging sites like Twitter, due to the personal nature of "following" their favorite celebrities and their tweets, users may have a very high intention to build online friendships with these celebrities (bridging social capital), thus creating a strong potential for spreading eWoM for brands and products. Brand managers can leverage the endorsing power wrought by celebrities on Twitter, and their ability to reach millions of followers through their tweets, as a way to increase their brand equity by encouraging positive eWoM about their brand. However, it should also be noted that prior research (e.g., Tripp, Jensen, and Carlson 1994) found that as the number of celebrity endorsements increased, consumers' perceptions of the celebrity's credibility and likeability, as well as their attitude toward the brand, became less favorable. As such, brand managers should proceed cautiously when using celebrities to endorse their brands and products on Twitter, because celebrities who are perceived as "tweeters for hire" may not be seen as credible endorsers by their followers.

Limitations and Suggestions for Future Research

Curvilinear relationship. Limitations of this study can serve as theoretical and practical bridges to future research in this vein. Prior studies about Facebook have indicated a curvilinear effect of social network size on social outcomes (Tong et al. 2008; Westerman, Spence, and Van Der Heide 2012). In our study, we maximized our manipulation effects by designing dichotomous celebrity Twitter pages with an extremely high number of followers versus a very low number of followers, omitting pages with a moderate number of followers. Follow-up studies should implement a more refined design with multiple social network sizes (e.g., low, moderate, and high) so as to investigate the curvilinear effect of number of Twitter followers.

Real celebrities and other-generated content. To maximize internal validity and the effects of manipulation stimuli while controlling for confounding effects of participants' predisposition toward celebrities, we created Twitter pages for semifictitious celebrities (images of actual fashion models were used along with pseudonyms). Follow-up studies should utilize actual celebrity Twitter pages to improve external validity. Among multiple information sources and cues in social media, this research focused on self-generated (celebrity's brand-related tweets) and system-generated (the number of followers) information, while overlooking the impact of other-generated information (Twitter followers' retweets) on consumer behavior. Examining three-way interaction effects among these multiple sources of information on eWoM in social media would be a meaningful addition to this line of research.

Limited product categories. Managers consider a range of criteria when choosing celebrity endorsers, such as product type, and match between celebrity image and brand personality (Erdogan, Baker, and Tagg 2001). Results from the current research did not show any main effect by product type or any significant interaction effect between product type and celebrity type, and this finding may be attributed to the use of low-involvement products (Bling H2O and Oval vodka). Future research should examine a wider variety of product categories to amplify the generalizability of our findings.

Bridging versus bonding social capital. Negative online messages can be judged more credible than positive messages when they are posted by those with whom one has close social relationships (Pan and Chiou 2011), suggesting the moderating role of tie strength (strong [bonding social capital] versus weak [bridging social capital]) in determining the persuasive effect of negatively valenced versus positively valenced eWoM. This study particularly focused on the bridging social capital (weak

ties) aspect of celebrity Twitter pages. Future studies should examine the building of bonding social capital (strong ties) on the sites, for example, retweets of brand-related messages by followers of the celebrity to their close friends, to provide richer behavioral data regarding consumer eWoM. Brand endorsements by celebrities with large numbers of followers on social media sites (bridging social capital), combined with the influence of social media users' eWoM on their strong ties (bonding social capital), wield tremendous potential for advertisers looking to harness the power of online social relationships to build their brands, as evidenced by the development of new measurement tools (e.g., Klout Scores) used to rank celebrities' influence levels and match them with specific brands and target audiences.

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