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**DOI:** <https://doi.org/10.1002/mar.21001>

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### Citation

CHUNG, Siyong and CHO, Hichang. Fostering parasocial relationships with celebrities on social media: Implications for celebrity endorsement. (2017). *Psychology and Marketing*. 34, (4), 481-495. Research Collection Lee Kong Chian School of Business.

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# **Fostering Parasocial Relationships with Celebrities on Social Media: Implications for Celebrity Endorsement**

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Published in *Psychology and Marketing*, Volume 34, Issue 4, 1 April 2017, Pages 481-495

<https://doi.org/10.1002/mar.21001>

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## **ABSTRACT**

The purpose of this study was to explore the underlying mechanisms through which the use of social media affects endorser effectiveness. Based on theories related to parasocial relationships, self-disclosure, and celebrity endorsement, this study proposed a theoretical research model and empirically tested the model using online survey data collected from 400 Korean Wave fans in Singapore. The results showed that consumers' parasocial interactions with celebrities through social media have a positive impact on celebrity endorsement. Specifically, we found that: (1) parasocial relationships mediated the relationships between social media interactions and source trustworthiness, (2) social media interactions influenced parasocial relationships via self-disclosure; and (3) source trustworthiness had a positive effect on brand credibility, which, in turn, led to purchase intention. Implications for research and practice are discussed.

A celebrity endorser is defined as “anyone 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). Celebrity endorsement is widely used in marketing because marketers believe that celebrities attract the attention of consumers and the celebrities' positive traits are transferred to the endorsed brands. To capitalize on this effect, in 2013, Nespresso renewed an endorsement deal with George Clooney worth US \$40 million (Daily Mail Reporter, 2013). Experts estimate that about 15% of advertisements in the United States and Europe use celebrity endorsements (Praet, 2008); however, celebrity endorsement is more popular in other countries, such as India (60% of advertisements; Shashidhar, 2008), South Korea (60%; Choi, Lee, & Kim, 2005), and Taiwan (45%; Solomon, 2006).

Research concerned with celebrity endorsement has found that it has positive effects on brand awareness and loyalty (Miller & Laczniak, 2011), attitudes toward advertising messages (Silvera & Austad, 2004), the attention audiences pay to these messages (Buttle, Raymond, & Danziger, 2000; Dean & Biswas, 2001; Koernig & Boyd, 2009), brand attitudes (Till, Stanley, & Priluck, 2008), brand awareness (Chan, Leung, Ng, & Luk, 2013), and purchase intention (Atkin & Block, 1983; Lafferty, Goldsmith, & Newell, 2002; Ohanian, 1991; Petty, Cacioppo, & Schumann, 1983; Till & Busler, 2000).

Various models and theories, such as the source attractiveness model (McGuire, 1985), the source credibility model (Hovland & Weiss, 1951), the meaning transfer model (McCracken, 1989), and the

match-up hypothesis (Kamins, 1990), have been employed to explain the underlying processes or conditions under which celebrities with different traits (e.g., expertise, trustworthiness, and attractiveness), and the fit between celebrity and brand, have positive or negative impacts on attitudes and behaviors related to celebrity endorsement.

While rich in conceptual models and abundant in empirical studies, there is a notable gap in previous research on celebrity endorsement in regard to an understanding of the factors or processes that affect how consumers perceive, understand, identify with, and build “relationships” with celebrity endorsers; there is also a lack of knowledge regarding the ways in which mediated experiences with celebrities (i.e., parasocial relationships) influence the effectiveness of celebrity endorsement. As Pornpitakpan (2004a) urged in her extensive review of the literature on source credibility, little research has been conducted to examine the variables that affect the formation of consumer perceptions and consumers’ evaluations of source credibility.

These matters are especially important in the current social media era, in which consumer–celebrity interactions on social media (hereafter “social media interactions”) have become more intimate, open, reciprocal, and frequent; as a consequence of this, celebrity endorsement can be affected by diverse cues and interpersonal processes. Celebrities increasingly use Facebook, Twitter, Instagram, or other social media platforms for personal communication, revealing their personal lives and thoughts to consumers. For instance, Kim Kardashian, once a reality TV celebrity, enjoys immense popularity and fame, and uses multiple social media platforms (such as Twitter, Instagram, and Snapchat) to engage in conversation with her fans. On Twitter alone, she has 46 million followers, with whom she shares details of her private life and her personal thoughts and feelings; she also promotes brands she endorses or owns to her followers. Due to her huge fan base, Kardashian is a highly sought-after brand endorser for many products, such as cosmetics, jewelry, shoes, diet pills, food items, and even toilet paper.

Opportunities for interactions with celebrities in the past were rare and carefully controlled by celebrities for publicity and promotion purposes. However, social media have changed this one-sided relationship to a more interactive and reciprocal one. Celebrities willingly share on social media seemingly personal information with their audiences. In response, audiences “follow” their favorite celebrities 24/7, peeking into their private lives and getting to know them “up close and personal.” These new media environments have narrowed the distance between audiences and celebrities and have altered the role of audiences from that of mere spectators or admirers to “friends” of celebrities. Despite the changing nature of consumer–celebrity interactions on social media, little research has been conducted to examine its implications for celebrity endorsement. Current insights are thus limited to specifying how and why social media interactions shape the mediated relationships with celebrities and how these relationships affect consumer perceptions and behavior in the context of celebrity endorsement.

To address the aforementioned gaps, we draw on the concepts of media psychology and celebrity endorsement, and propose a research model with which we empirically tested the relationship between social media interactions and celebrity endorsement. Specifically, our objectives of this study are as follows: (1) to develop a conceptual framework that can provide a better understanding of the relationship between social media interactions and celebrity endorsement; (2) to delineate the underlying mechanisms through which social media interactions affect celebrity endorsement by focusing on the mediating roles of parasocial relationships (Cohen, 2001; Horton & Wohl, 1956) and self-disclosure (Derlega, Winstead, Wong, & Greenspan, 1987); and (3) to empirically examine the degree to which social media interactions have an impact on source trustworthiness, brand credibility, and purchase intentions.

We empirically tested our theoretical model with data from an online survey of 400 fans of the Korean Wave (*Hallyu*) in Singapore. We present in this study the results of our hypothesis testing, for which we

used structural equation modeling (SEM). It concludes with a discussion of the findings and implications for research and practice.

## **LITERATURE REVIEW**

### **Social Media and Celebrities**

Social media have become a platform of unparalleled value to celebrities and consumers; they provide a safe and convenient way for celebrities to interact with a large number of fans. Many celebrities use various social media platforms (such as Facebook, Twitter, and Instagram) to engage in constant conversation with their fans. For instance, Lady Gaga, Katy Perry, and Justin Beiber each have more than 60 million fans following them on Twitter or Facebook. Celebrities use social media to promote their movies and concerts or to create awareness of charity events or causes. For example, Katy Perry was highly successful with her Twitter promotion of her 2011 California Dreams tour and, in 2011, Ellen DeGeneres and other celebrities tweeted to raise funds for automobile accident victims (Daily Mail Reporter, 2011). However, many celebrities turn to social media for personal communication without a marketing intent (Steuer & Lawson, 2013). For instance, Snoop Dogg has tweeted to his fans to “keep pimpn” and Mariah Carey has tweeted or sent direct messages to some of her fans on Twitter (Marwick & Boyd, 2011). The interactive conversation with celebrities and the hope of receiving exclusive communication from them excite fans and encourages them to remain dedicated to the celebrities they follow.

### **Parasocial Relationships**

Consumer–celebrity relationships built via social media exchanges can be explained by the concept of parasocial relationships. “Parasocial relationships” (Horton & Wohl, 1956) refers to intimate relationships between audiences and celebrities. Parasocial relationships arise when individuals are repeatedly exposed to a media persona, and the individuals develop a sense of intimacy, perceived friendship, and identification with the celebrity (Horton & Wohl, 1956).

Originating from psychology, the concept of parasocial relationships has been extensively researched in media studies that have explored the audience's parasocial relationships with a variety of targets, including soap opera characters (Rubin & Perse, 1987), TV shopping hosts (Grant, Guthrie, & Ball-Rokeach, 1991), comedians (Auter, 1992), talk show hosts (Rubin & Step, 2000), and royalty (Brown, Basil, & Bocarnea, 2003).

A number of studies have been conducted to identify the dimensionality of parasocial relationships (Auter & Palmgreen, 2000; Cohen, 2001; Perse, 1990; Rubin & Perse, 1987; Tal-Or & Cohen, 2010). Different scales with a varying number of dimensions (intimacy, wishful identification, problem solving, companionship, friendship, interaction, understanding, and empathy) have been proposed. However, the current study draws on the original conceptualization of parasocial relationships by Horton and Wohl (1956), which specifies friendship, understanding, and identification as key themes for parasocial relationships.

In a parasocial context, friendship can be defined as a mutual relationship that is characterized by intimacy and liking (Tukachinsky, 2010). Friendship formation is facilitated by the frequency of contact (Fehr, 1996). Therefore, repeated exposure to a celebrity—especially one who uses direct modes of address and a personal and intimate conversational style—leads consumers to feel a high level of

intimacy with the celebrity, resulting in “ritualistic viewing” of episodes of television shows, which, in turn, further develops their loyalty to the celebrity (Ballentine & Martin, 2004), and causes them to perceive celebrities as their surrogate friends (Stern, Russell, & Russell, 2007). Understanding is defined as the degree to which a fan thinks that he or she knows the celebrity personally and profoundly (Horton & Wohl, 1956). Increased familiarity with and accumulated knowledge about a celebrity creates this sense of understanding the values and motives of the celebrity. For a fan who perceives an intimate relationship with a celebrity, “there are no problems of understanding or empathy too great to be solved” (Horton & Wohl, 1956, p. 217). Lastly, identification is a process of social influence through which an individual adopts attitudes or behaviors of another when there are clear benefits associated with such adoption (Kelman, 1961). In the context of parasocial relationships, it is a psychological attachment between the viewer and a character (Cohen, 2001; Cole & Leets, 1999).

Social media are perfect platforms for promoting parasocial relationships. Magazines or entertainment news programs that used to intermittently provide celebrity information have rapidly been replaced by social media. Nowadays, consumers hear directly from celebrities through social media; this helps them feel they know celebrities up close and personal. The use of the first-person (“I” and “we”) and spelling and grammatical errors in social media messages from celebrities make their audiences feel closer to them (Marwick & boyd, 2011), thus “eras[ing] for the moment the line which separates persona and spectator” (Horton & Wohl, 1956, p. 218).

Only a few studies have examined the effects of parasocial relationships in the context of celebrity endorsement. Limited research has shown that parasocial relationships with celebrities have a positive effect on consumer attitudes and behaviors related to celebrity endorsement. For instance, Lim and Kim (2011) found that consumers who developed parasocial interactions with TV shopping hosts are likely to have higher levels of shopping satisfaction. Similarly, consumers were found to have positive attitudes toward products (Knoll, Schramm, Schallhorn, & Wynistorf, 2015) and strong intentions to purchase them (Kim, Ko, & Kim, 2015) when the products were endorsed by celebrities with whom consumers had built parasocial relationships. Labrecque (2014) examined parasocial relationships between consumers and brands, and found that parasocial relationships lead to brand loyalty and willingness to provide personal information to brands in Web site forms and customer surveys. Labrecque (2014) reported that, when consumers perceived there to be a high level of interaction and openness in their communication with brands on social media, the strength of their parasocial relationships with the brands increased.

Taken together, social media interactions can create a sense of intimacy, a feeling of connectedness, perceived friendship and understanding, and identification with celebrities. Frequent social media interactions that are rich in personal detail and tell stories not found in the mainstream media can ultimately foster parasocial relationships with celebrities. Hence, we propose the following hypothesis:

**H1:** Social media interactions and parasocial relationships are positively associated with each other.

## **Self-Disclosure**

An important characteristic of social media is intimate, frequent, and highly confessional messaging. According to the social penetration theory (Altman & Taylor, 1973), people's personalities are the systematic organization of numerous items—such as their ideas, beliefs, and feelings about themselves, other people, and the world—and are gradually revealed to others through interpersonal interactions that move from the superficial to the intimate. Revealing these hidden, personal ideas and feelings to others is called self-disclosure (Cozby, 1973; Wheelless & Grotz, 1977). Self-disclosure has two subdimensions: breadth and depth. Breadth refers to the number of topics covered, while depth refers to the degree to which the information revealed is private and intimate. As a relationship develops, the things that people

reveal to their relationship partners evolve: They discuss not only the commonplace, but also intimate matters, and not only the easily observable, but also the hidden. Hidden and personal beliefs—such as beliefs concerning self-identity, dependence on others, and self-worth—can be perceived only by people in a deep, intimate relationship. The literature on interpersonal communication reports that self-disclosure is important to the development of interpersonal relationships and critical to liking others, because people tend to like people who disclose personal information to them (Collins & Miller, 1994; Greene, Derlega, & Matthews, 2006; Taylor, Gould, & Brounstein, 1981). Likewise, self-disclosure plays an essential role in developing parasocial relationships. Horton and Wohl (1956) stated that media personalities who “personally and privately” converse with an audience make the audience more likely to anticipate a response and thus media personalities can create parasocial relationships easily. Perceived self-disclosure by celebrities enhances a feeling of social presence, thereby enhancing parasocial relationships with them (Kim & Song, 2016).

Self-disclosure is embedded in social media. Celebrities on social media often engage in high levels of self-disclosure through seemingly honest expressions of emotion, the sharing of highly opinionated statements on various topics, uploads of “selfies” of themselves and their families, and inside information (such as on backstage happenings); these make social media interactions feel personal, intimate, and inviting (Marwick & Boyd, 2011). The self-disclosing nature of social media interactions enhances perceived intimacy and bonding, thus fostering parasocial relationships. Hence, we propose our second hypothesis:

**H2:** The relationship between social media interactions and parasocial relationships is mediated by self-disclosure.

### **Source Credibility**

Source credibility in this context refers to the positive characteristics of an endorser that lead to consumers’ accepting the veracity or honesty of their messages (Ohanian, 1990). Studies on source credibility report that information from credible sources is perceived to be more valid and is more persuasive than other information, thus positively influencing beliefs, opinions, attitudes, and/or behaviors through a process called “internalization” (Craig & McCann, 1978; Dholakia & Sternthal, 1977; Hovland & Weiss 1951; Moore, Hausknecht, & Thamodaran, 1986; Ohanian, 1991; Sternthal, Phillips, & Dholakia, 1978; Wu & Shaffer, 1987). Internalization takes place when a consumer accepts an endorser's advertising claims as his or her own. Internalization is important for marketing as, once internalization occurs, the attitude a consumer adopts tends to be sustained, even if the endorser switches to a different position, the endorser is replaced by another/others, or the source of a particular claim is forgotten (Shimp & Andrews, 2012).

Source credibility consists of two subdimensions: expertise and trustworthiness. Expertise refers to the relevant knowledge, experience, and skills a source possesses with regard to the subject matter of an endorsement (Hovland & Weiss, 1951); trustworthiness refers to a source's honesty, credibility, and integrity (Erdogan, 1999). Expertise involves an endorser's knowledge, skills, and performance; it is evident to and readily acknowledged by consumers. For example, John Travolta's endorsement of Qantas (an Australian airline) is considered to have exploited source expertise—his expert knowledge and experience as a commercial pilot and owner of an airplane (Seno & Lucas, 2007). A celebrity with relevant expertise is highly persuasive (Aaker, 1997) and increases brand recognition (Speck, Schumann, & Thompson, 1988), thus enhancing purchase intentions (Ohanian, 1991).

On the other hand, trustworthiness is defined as the degree of confidence in the communicator's intent to communicate the assertions he or she considers most valid (Hovland, Janis, & Kelley, 1953). While there

may be publicly accessible indicators of expertise, trustworthiness may be more difficult to assess. Evaluating a person's trustworthiness requires a substantial amount of information about the person (Rempel, Holmes, & Zanna, 1985); this can be gained and reinforced through repeated communication and interaction. For example, in the case of Lionel Messi's endorsement of Turkish Airlines, unlike in Travolta's case, source trustworthiness is evaluated by consumers as they decide whether or not to accept the celebrity's claims in the advertisement. Messi's current tax evasion scandal will probably damage his perceived trustworthiness; consumers may now view him as being irresponsible and dishonest.

We focus on source trustworthiness in this study because a recent meta-analysis of celebrity endorsement reveals that source trustworthiness has a greater weight on attitude change than source expertise (Amos, Holmes, & Strutton, 2008). Source trustworthiness is particularly important when endorsed brands or products do not require an endorser's expertise. In the context of celebrity endorsement, it can be argued that continuous social media interactions provide sufficient information with which to assess the level of trustworthiness of various celebrities. We, therefore, posit our third hypothesis:

**H3:** Social media interactions and source trustworthiness are positively associated with each other.

Besides the main, direct effect of social media interactions on source credibility, we expect this effect to be mediated by parasocial relationships. Believing that a person is trustworthy involves believing that the person's actions are not guided solely by self-interest in uncertain situations. Evaluation of another's trustworthiness requires a deeper understanding of his or her personal character, motivation, preferences, goals, and values; such an understanding is gained only by people in deep interpersonal relationships with the person in question (Altman & Taylor, 1973). In the context of celebrity endorsement, consumers in parasocial relationships with a celebrity will have positive evaluations of the trustworthiness of the celebrity. Knowing that celebrity endorsers are paid to give their endorsements, consumers are skeptical about their claims regarding endorsed brands. However, substantial interpersonal relationships help celebrities achieve a higher level of trustworthiness. It is assumed, therefore, that parasocial relationships affect the perceived trustworthiness of celebrity endorsers. Accordingly, we posit our fourth hypothesis:

**H4:** The relationship between social media interactions and source trustworthiness is mediated by parasocial relationships.

### **Brand Credibility and Purchase Intentions**

Analogous to the concept of endorser credibility, brand credibility refers to the willingness of firms to deliver on their claims (their trustworthiness) and their ability to deliver what they promise (their expertise; Erdem & Swait, 2004). Brand credibility is in large part created and shaped by the cumulative impact of all previous marketing strategies, such as advertising and promotions (Baek & King, 2011) that employ celebrity endorsers. McCracken's meaning transfer model (1989) explains that certain personality traits of a celebrity may be transferred onto a product or a brand the celebrity endorses. Perceptions of brand endorsers are part of the signals that the endorsed brands convey and that are communicated to consumers. It is therefore assumed that endorser credibility is likely to be assessed when brand credibility perceptions are formed. Past studies on brand management found that endorser credibility has a positive effect on brand attitudes (Lafferty & Goldsmith, 1999) and brand beliefs (Yoon, Kim, & Kim, 1998). Recently, Spry, Pappu, and Cornwell (2011) reported that highly credible endorsers transferred their credibility to the brands they endorse. Therefore, Hypothesis 5 is posited as follows:

**H5:** Endorser credibility and brand credibility are positively associated with each other.

Evidence about the effects of brand credibility has accumulated in the literature on marketing (Erdem & Swait, 2004; Swait & Erdem, 2007; Sweeney & Swait, 2008; Wang & Yang, 2010). Researchers have employed signaling theory (Spence, 1973, 1974) to explain the role of brand credibility in consumer decision making. Drawing largely on information economics, signaling theory posits that information asymmetry pervades between transactional parties in a marketing place that is characterized by imperfect information (Connelly, Certo, Ireland, & Reutzel, 2011). For instance, in the context of celebrity endorsement, companies give incomplete or imperfect information about the products through advertisements, leaving consumers in a status characterized by asymmetric information (Spry, Pappu, & Cornwell, 2011).

To reduce the problem of information asymmetry, a signaler (e.g., a company) sends out signals that would reveal relevant information about the latent and unobservable quality of the individuals, products, and organizations involved (Connelly et al., 2011). Signals in the context of marketing can be high price (Chu & Chu, 1994), warranties (Boulding & Kirmani, 1993), and advertising expenditures (Kirmani, 1997). Among others, brand credibility is the most effective signal (Tirole, 1990) because people regard brand credibility as a surrogate or proxy for product quality and production position (Erdem & Swait, 1998). Using brand credibility as a signal, consumers save information gathering and processing costs (e.g., reading product reviews on a Web site or on social media, seeking advice from experts or other consumers). Brand credibility reduces information asymmetry in consumer decision making (Erdem & Swait, 1998; Spry et al., 2011) and thereby decreases perceived risk and increases consumer confidence in products. This leads to choice set formation (Swait & Erdem, 2007), brand loyalty (Sweeney & Swait, 2008), and purchase intentions (Erdem & Swait, 2004; Wang & Yang, 2010), even when a branded product costs more than similar products from other competing brands (Kemp & Bui, 2011; Netemeyer et al., 2004). Therefore, Hypothesis 6 is posited as follows:

**H6:** Brand credibility and purchase intentions are positively associated with each other.

## **METHOD**

### **Procedure**

An online survey instrument was used to collect data from adult fans (above 18 years of age) of the Korean Wave in Singapore. The Korean Wave (or *Hallyu*) refers to the popularity of South Korean culture, including music, drama, and movies. Currently, it is the most popular pop culture in Asia, including Singapore. We conducted this study in Singapore for two reasons: (1) the Korean Wave is popular in Singapore; and (2) despite its popularity, advertisements featuring Korean celebrities are not as widespread in Singapore as in Korea, and the effects from prior exposure to advertisements featuring Korean celebrities were, therefore, minimal. The respondents were recruited through popular Korean Wave fan Web sites, Facebook, and Twitter, as well as by word of mouth. In the first part of the questionnaire used for the survey, the respondents were asked to name their favorite Korean celebrity and to answer questions concerning social media use, parasocial relationships, and self-disclosure. After that, they were shown a mock advertisement featuring the celebrity of their choice and asked questions concerning source trustworthiness, brand credibility, and purchase intentions about a product featured in the mock advertisement; there were also questions designed to gather demographic information about the respondents. A fictitious brand was created for the mock advertisement in order to minimize the influence of consumer knowledge of, attitudes regarding, and loyalty to existing brands. Juice was selected, as it is a moderate involvement product that does not require too much of an evaluation process (such as a car or house would) or too little (e.g., detergents or a toothbrush; Petty et al., 1983). A total of 138 mock advertisements, featuring different celebrities, were created for this study. A sample of the mock



advertisement can be found in Appendix 1. In order to pretest the reliability of the measures and the appropriateness of the stimulus used in this study, we conducted a pilot test of the survey questionnaire using 42 college students in Singapore. Based on the results of the pilot test, we improved the wording and length of the survey. The results showed that the levels of reliability of the measures were adequate and the stimulus was appropriate. The final survey took about 10–20 minutes to complete. At the end of the survey, respondents were offered a voucher worth 10 Singapore dollars as a token of gratitude.

## Sample

Of the 400 respondents, 83.5% ( $n = 334$ ) were female and 16.5% ( $n = 66$ ) were male. Most of them were aged 21–24 (63.4%); 18- to 20-year-olds formed the next largest group (18.9%), followed by 25- to 29-year-olds (11.2%); and the rest were 30 years old or above (6.5%). The 2008 East Asian Social Survey (EASS) revealed that fans of the Korean Wave in China, Taiwan, and Japan are predominantly young and female (Yang, 2012). Hence, we believe that the demographic profiles of our sample are to an acceptable degree representative of the population.

## Measurements

In total, 31 questions were developed; these covered the key variables and the demographic information. Most of the survey items were adapted from prevalidated research work, so as to increase the construct validity, except the measure for social media interactions, which was created for this study. Seven-point Likert scales were used to measure parasocial relationships, self-disclosure, and purchase intentions; and 5-point Likert scales covered social media interactions, source trustworthiness, and brand credibility. The survey items and descriptive statistics for each scale are presented in Appendix 2; the factor analysis of the parasocial relationships scale is reported in Table 1 and the reliability and validity of the scales, and the intercorrelations among them in Table 2.

Table 1. Factor Analysis for Parasocial Relationship Scale

Adopted from	Items	Component	
		Friendship	Understanding
Rubin & Perse (1987)	[celebrity's name] makes me feel comfortable, as if I am with a friend	0.795	0.300
	I would like to have a friendly chat with [celebrity's name]	0.848	0.139
	If [celebrity's name] were not a celebrity, we would have been good friends	0.717	0.310
Tal-Or & Cohen (2010)	I think I understand [celebrity's name] quite well	0.238	0.863
Created by the authors	When [celebrity's name] behaves in a certain way, I know the reasons for his/her behavior	0.252	0.826
	I can feel [celebrity's name]'s emotions in certain situations	0.239	0.837
Rubin et al. (1985)	[celebrity's name] seems to understand the kinds of things I want to know	0.214	0.853
Auter & Palmgreen (2000)	[celebrity's name] reminds me of myself	0.266	0.808
	I can identify with [celebrity's name]	0.301	0.787

Table 2. Construct Reliability, Validity, and Intercorrelations

	$\alpha$	AVE	1	2	3	4	5	6
1. Social media interactions	0.798	n/a	–					
2. Self-disclosure	0.891	0.737	0.326	<b>0.858</b>				
3. Parasocial relationships	0.711	0.653	0.470	0.793	<b>0.808</b>			
4. Source trustworthiness	0.943	0.755	0.133	0.481	0.460	<b>0.869</b>		
5. Brand credibility	0.883	0.602	0.137	0.368	0.486	0.524	<b>0.776</b>	
6. Purchase intention	0.737	0.557	0.187	0.317	0.477	0.370	0.427	<b>0.746</b>

*Diagonal bolded elements are the square root of AVE.*

### Parasocial Relationships

Nine items were employed to assess three subconstructs of parasocial relationships; namely, friendship, understanding, and identification. Three items for the friendship dimension were adopted from scales from Rubin and Perse (1987). The understanding dimension consists of three items; one item was from Tal-Or and Cohen (2010), and two items were created based on the theoretical conceptualization of parasocial relationships (Horton & Wohl, 1956). For identification dimension, two items were adopted from Auter and Palmgreen (2000), and one item from Rubin et al.'s (1985). As noted above, the results of the pilot test ( $N = 42$ ) showed that all items of parasocial relationships, including the two newly developed items for understanding, had an acceptable level of internal consistency ( $\alpha > 0.70$ ). With the final survey data ( $N = 400$ ), we conducted an exploratory factor analysis (EFA) with varimax rotation, which revealed that understanding and identification could be merged into a single factor (labeled “understanding”). Thus, the respondents’ parasocial relationships were gauged by measuring two distinctive subfactors: perceived friendship ( $\alpha = 0.76$ ) and understanding ( $\alpha = 0.93$ ).

### Self-Disclosure

This scale measured the perceived amount of self-disclosure by the respondents’ chosen celebrities and the perceived authenticity of this self-disclosure. The original measures of self-disclosure (e.g., Wheelless & Grotz, 1977) assess self-disclosure by discloserer him/herself. Since we focused in this study on the receiver's perception of the self-disclosure of a celebrity, we adapted two items from Wheelless and Grotz (1977). One item was from Laurenceau, Barrett, and Pietromonaco (1998), which assessed the perceived partner's disclosure. Three items had Cronbach's  $\alpha$ s of 0.89.

### Social Media Interactions

A two-item scale ( $\alpha = 0.80$ ) was created to assess the frequency of the respondents’ use of social media to engage in communication with their favorite celebrities. The questions asked about respondents’ use of Facebook, Twitter, and Instagram, in light of the widespread use of these channels. The data on Instagram use was not included in the subsequent analysis because only a few respondents (7.2% of the total sample) used Instagram to interact with their favorite celebrities.

### Source Trustworthiness

This variable was measured with a scale developed by Ohanian (1990). The respondents were presented with a mock advertisement featuring their selected celebrity and asked to indicate how they felt about the

celebrity in the advertisement, regarding the celebrity's trustworthiness. Five items were presented in a five-item semantic differential scale measuring honesty, sincerity, dependability, reliability, and trustworthiness ( $\alpha = 0.94$ ).

### **Brand Credibility**

This variable was measured with the scale developed by Erdem and Swait (2004); it had five items ( $\alpha = 0.88$ ).

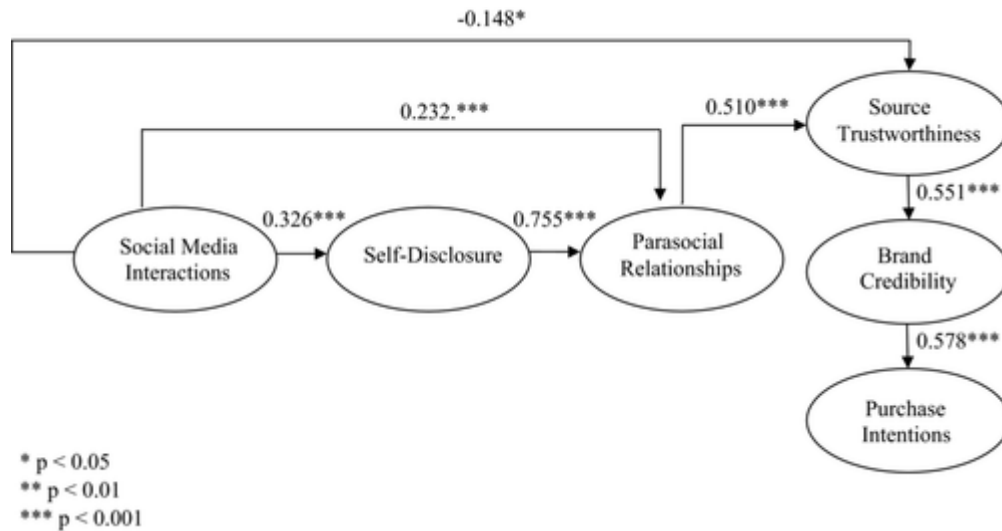
### **Purchase Intentions**

The respondents were asked to indicate the degree to which they intended to purchase the product featured in the advertisement. A three-item measure adapted from prevalidated scales (Bagozzi, 1981; Yoo & Donthu, 2001) was used ( $\alpha = 0.74$ ).

## **RESULTS**

We examined the measurement model, the structure of the research model, and each hypothesized path utilizing SEM, using Mplus version 7.4. Before examining our measurement and structural models, we tested multivariate normality using MVN version 1.6. The results showed that our survey data were not multivariate normal, according to such multivariate tests as Mardia's multivariate normality test ( $g1p = 97.54, p < 0.001$ ;  $g2p = 880.12, p < 0.001$ ), the Henze-Zirkler test ( $HZ = 1.05, p < 0.001$ ), and Royston's H test ( $H = 1,524.835, p < 0.001$ ). When employing 5- or 7-point Likert scales, as we did, it is not unusual to have data with distributions that are not normal. Hence, in the subsequent SEM analyses, we employed MLR (a maximum likelihood parameter estimator with standard errors) and chi-square test statistics, both of which are robust to nonnormality. A component-based SEM (e.g., a partial least squares) approach might have been a suitable alternative, as it requires less restrictive distributional assumptions about the data (e.g., Cassel, Hackle, & Westlund, 1999; Chin, 1998). However, we chose a covariance-based SEM approach using a robust estimator because it not only allows the researcher to explicitly model the measurement error variance/covariance structure, but also provides multiple indices to assess the model's global goodness of fit. Common-method bias was examined using Harman's single-factor test. The results of the EFA (using unrotated principal component analysis) showed that there were seven distinct factors with eigenvalues greater than 1.0. The seven factors accounted for 76.45% of the total variance, and the first (largest) one did not account for a majority of the variance (36.40%). Hence, no general factor is apparent. Therefore, it is posited that common-method bias is not a serious problem in our study, though the results do not preclude the presence of common-method variance.

Figure 1 shows the research model and the results of the SEM analyses. All the factors in the model were latent variables, except for social media interactions. The social media interactions variable was incorporated in a composite variable due to the number of items for social media interactions being inappropriately small (there were only two items) for the creation of a latent variable (Hoyle, 2011).



**Figure 1** Results of SEM analysis.

First, we evaluated the validity of the measured constructs by conducting a confirmatory factor analysis (CFA). As Table 2 shows, all the latent variables had good convergent validity (average variance extracted (AVE) > 0.50, Cronbach's  $\alpha$  > 0.70) and good discriminant validity (with square roots of the AVE values larger than the factor correlation coefficients). Consistent with the results of the preliminary EFA, the results of the CFA suggested that a parasocial relationship consists of two highly correlated subfactors ( $r = 0.621$ ). In comparison to first-order models with highly correlated factors, second-order factor models can provide a more parsimonious and interpretable model when researchers hypothesize that a higher order factor underlies their data. Hence, we created a second-order factor using the two subfactors of a parasocial relationship: friendship and understanding. The higher order measurement model for parasocial relationships was confirmed with excellent model fit indices, such as the chi-square statistics ( $\chi^2(23) = 32.986, p > 0.05$ ), RMSEA = 0.033 (90% CI [0.000, 0.056]), CFI = 0.994, TLI = 0.991, and SRMR = 0.031.

Second, we evaluated the research model's global goodness of fit. The results showed that the chi-square statistics were significant ( $\chi^2(284) = 435.136, p < 0.000$ ) and indicated that the fit of the data with the hypothesized model was not entirely adequate. However, the appropriateness of the chi-square test for assessing the overall model fit has been routinely questioned, owing to its sensitivity to sample size and model complexity (Bollen & Long, 1993). In light of this, alternative model fit indices have been proposed (e.g., RMSEA, CFI, TLI, SRMR) to test a model's approximate fit (Bollen & Long, 1993). These indices revealed an acceptable approximate fit for our research model: RMSEA = 0.036 (90% CI [0.029, 0.043]), CFI = 0.975, TLI = 0.971, and SRMR = 0.083.

The final step in the model estimation was to examine the significance of each hypothesized path. The results are summarized in Figure 1, which shows that social media interactions ( $\beta = 0.232, p < 0.001$ ) had a positive association with the formation of consumers' parasocial relationships with celebrities. Hence, H1 is supported. Social media interactions ( $\beta = 0.326, p < 0.001$ ) was positively associated with perceived self-disclosure by celebrities, which, in turn, had a positive association with parasocial relationships ( $\beta =$

0.755,  $p < 0.001$ ). The indirect effect of social media interactions on parasocial relationships via self-disclosure was significant ( $\beta_{\text{indirect}} = 0.246$ ,  $p < 0.001$ ).<sup>1</sup> Hence, the results support H2.

Social media interactions had a negative association with source trustworthiness ( $\beta = -0.148$ ,  $p < 0.05$ ). Hence, H3 is not supported. As noted above, social media interactions had both a direct ( $\beta = 0.232$ ,  $p < 0.001$ ) and an indirect effect ( $\beta_{\text{indirect}} = 0.246$ ,  $p < 0.001$ ) on parasocial relationships, which, in turn, had a positive relationship with source trustworthiness ( $\beta = 0.510$ ,  $p < 0.001$ ). The total indirect effect of social media interactions on source trustworthiness via parasocial relationships was significant ( $\beta_{\text{indirect}} = 0.285$ ,  $p < 0.001$ ). Hence, H4 is supported.

Finally, source trustworthiness had a positive association with brand credibility ( $\beta = 0.551$ ,  $p < 0.001$ ), which, in turn, had a positive relationship with purchase intentions ( $\beta = 0.578$ ,  $p < 0.001$ ). Therefore, H5 and H6 are supported.

We performed post hoc analyses in order to test whether the results supported a full mediation, a partial mediation, or a nonmediation model (Baron & Kenny, 1986). First, we examined a nonmediation model in which social media interactions was predicted to have a direct effect on parasocial relationships. The results showed that social media interactions ( $\beta = 0.465$ ,  $p < 0.001$ ) had a significant direct effect on parasocial relationships when self-disclosure was not added to the model (i.e., in the nonmediation model). As Figure 1 shows, the addition of self-disclosure as a mediator substantially reduced the direct effects of social media interactions on parasocial relationships ( $\beta = 0.232$ ,  $p < 0.001$ ). Hence, the results suggest a partial mediation model for social media interactions.

We followed the same steps to test the mediation effect predicted in H4. Social media interactions ( $\beta = 0.094$ ,  $p < 0.01$ ) had a significant direct effect on source trustworthiness in the nonmediation model. When parasocial relationships and self-disclosure were added to the research model, the direct effect of social media interactions on source trustworthiness became negative ( $\beta = -0.148$ ,  $p < 0.05$ ). The results suggested an inconsistent mediation model in which measures of the mediated and direct effects have opposite directions (MacKinnon, Fairchild, & Fritz, 2007). It appears that social media interactions have dual effects on source trustworthiness, such that social media interactions exerts positive indirect effects when it leads to positive user experiences (in the form of enhanced self-disclosure and parasocial relationships), but has a relatively small, negative direct effect when it does not result in such positive experiences.

Overall, the results support our research model, in that social media interactions led to stronger parasocial relationships. Parasocial relationships via social media had a significant marketing value, to the extent that they led to higher levels of source trustworthiness, which, in turn, had a positive association with purchase intentions via brand credibility. Some implications of the results for research and practice are discussed below.

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<sup>1</sup> Note: To test the significance of the indirect effects, researchers often favor the bias-corrected bootstrap method to obtain confidence limits, as it makes fewer assumptions about the distribution of the indirect effect compared to traditional methods, such as the Sobel test (Preacher & Hayes, 2008). Mplus does not provide the bootstrapping method when the MLR estimator is used. It has been suggested that the MLR standard error (SE) should be similar to the bootstrapping-based SE. To confirm this, we ran a post hoc analysis using the bias-corrected bootstrapping method with 5000 resampling (the ML estimator was employed). The results were almost identical to those using MLR, suggesting that the test results reported in this paper are not strongly affected by a nonnormal SE of indirect effects.

## DISCUSSION

The major goal of this study was to delineate a research framework with which we could identify how consumers' interactions with celebrities via social media have effects on celebrity endorsement, especially through the mediated experience of parasocial relationships. The research framework we proposed explains that consumers' social media exchanges with celebrities facilitate parasocial relationships via perceived self-disclosure, which, in turn, influences source trustworthiness. Source trustworthiness, then, has positive effects on brand credibility, which influences purchase intention. The major findings of the study are discussed below.

Overall, the findings show that social media exchanges with celebrities have a significant impact on celebrity endorsement, and that the exchanges have different implications depending on whether its effect is mediated or nonmediated by self-disclosure and parasocial relationships. First, consistent with the findings of recent studies (Cohen & Tylor, 2016; Kim & Song, 2016; Labrecque, 2014), we found a direct relationship between social media interactions and parasocial relationships. Technological affordances of social media, such as interactivity and immediacy, and an intimate communication style on social media, create a suitable environment for the fostering of close and meaningful relationships between consumers and celebrities. Frequent messages enriched with personal information from a communication partner enhance psychological proximity and intimacy, which can further develop into friendship (Dibble, Levine, & Park, 2012; Parks & Floyd, 1996; Stern et al., 2007; Tukachinsky, 2010). Given that the responsiveness and the availability of friends are the key elements of friendship formation (Fehr, 1996), celebrities who are responsive and conversational on social media can lead people to think of celebrities "as if they were in the circles of their peers" (Horton & Wohl, 1956, p. 215). For instance, celebrities such as Justine Timberlake and Mariah Carey are known to respond to questions from fans and to send birthday wishes to their fans through social media. Even though the chances of receiving a direct message from a celebrity are extremely slim, the very possibility of this gives fans a sense of intimacy and reciprocity with their favorite celebrities (Hartmann & Goldhoorn, 2011). Social media are thus an effective tool in the fostering of parasocial relationships with celebrities.

Second, self-disclosure was found to play an important role in mediating the relationships between social media and parasocial relationships. Consistent with prior studies on interpersonal relationships in computer-mediated environments (Joinson, 2001; Nguyen, Bin, & Campbell, 2012; Tidwell & Walther, 2002), our findings provide evidence that self-disclosure is essential to building and developing "pseudo-relationships" (Tian & Hoffner, 2010) with media figures in a mediated environment. Acts of disclosure imply that the discloser values the interpersonal relationship and wishes to maintain and nurture it. Therefore, consumers interpret celebrities' self-disclosure as a sign of friendship being offered. Given that self-disclosure always bears certain risks, including misunderstandings, rumors, and gossip (Vogel & Wester, 2003), celebrities' disclosure is precious. Celebrities' perceived openness and willingness to be vulnerable enhance consumers' feeling of intimacy and friendship, which results in the formation of parasocial relationships with them.

This result further indicates that celebrities who do not disclose personal details in their social media messages may be viewed as not being honest and authentic. As social penetration theory (Altman & Taylor, 1973) explains, celebrities who wish to create a highly intimate personal relationship with consumers should understand that both the breadth (the variety of topics) and the depth (the personal significance of these topics) of disclosure in their social media messages matter. In a similar study context, Labrecque (2014) reported that openness and interactivity were essential to building parasocial interactions with brands and further suggested that highly personalized automated responses could, with some limitations, create strong parasocial interactions between consumers and brands.

Third, the findings show that social media have a direct negative effect and an indirect positive effect on source trustworthiness through parasocial relationships and self-disclosure, respectively. The positive indirect effect of social media on source trustworthiness confirms our hypotheses. When a perceiver (e.g., a consumer) feels that a target (e.g., a celebrity) is open, self-disclosing, intimate, and understandable, these positive feelings lead to higher levels of trust in that target (Tyler, 2001).

The direct negative effect of social media on source trustworthiness is somewhat surprising and interesting. Contrary to the commonly held belief that popularity on social media (e.g., a large number of followers and friends) leads to endorser effectiveness, this study found that interacting with celebrities on social media can have adverse effects on celebrity endorsement if it is not mediated by positive experiences, such as self-disclosure and parasocial relationships. A possible reason for this might be that source trustworthiness is a character-based trait with subdimensions such as benevolence, honesty (Altman & Taylor, 1973), predictability (Tyler, 2001), and dependability (Rempel et al., 1985). When evaluating source trustworthiness, consumers engage in rigorous information processing using all available information. Through social media exchange, consumers learn more about celebrities, including the negative characteristics and undesirable behaviors of celebrities. In fact, many celebrities frequently get into trouble for their posts or tweets that are inappropriate, dishonest, or that reveal irresponsible behaviors. As shown in previous research, negative information about a celebrity is detrimental to advertising campaigns (Erdogan & Baker 2000). Likewise, exposure to inappropriate messages through social media will lead to negative evaluations of celebrities' trustworthiness, consequently undermining endorser effectiveness.

However, when mediated by parasocial relationships, social media have a positive effect on source trustworthiness. This finding highlights that parasocial relationships play an essential role in shaping source trustworthiness perception among social media users. That is, when evaluating an endorser's trustworthiness, consumers are influenced by the quality and depth of relationships they develop with the endorser.

Friendships have many important functions, such as indicating a person's importance in one's life, giving opportunities to learn new skills, and providing protection or help in difficult situations (Bukowski, Hoza, & Boivin, 1994). In developmental and adolescent psychology, the protective function of friendship is considered to be an important factor in reducing victimization from bullying as friends stick up for each other (Bollmer, Milich, Harris, & Maras, 2005; Hodges, Boivin, Vitaro, & Bukowski, 1999). Similarly, parasocial relationships seem to create a buffer against negative information. Just as we are with our close friends, consumers in deep parasocial relationships with celebrities are understanding and forgiving, and are therefore less likely to be affected by negative information they find in celebrities' social media messages.

This suggests that the fame and popularity of celebrities do not transfer directly into endorser effectiveness unless celebrities establish parasocial relationships with consumers. An intimate, friendship-like relationship built on cumulative information disclosure and a deep understanding of the endorser will influence evaluations of the endorser's trustworthiness.

Finally, the findings show that social media exchanges with consumers can also have tangible impacts on consumer marketing. Consistent with previous research (Sweeney & Swait, 2008; Wang & Yang, 2010), this study found that source trustworthiness influences and enhances brand credibility, and thus influences purchase intention. This suggests that social media marketing strategies using celebrities are an effective tool in promoting the sales of endorsed products.

Overall, the findings discussed above have several implications for research. We propose in this study a research framework that integrates the insights from previous studies about celebrity endorsement and media psychology. This integrative research framework adds to our understanding of celebrity endorsement by specifying the underlying process through which social media interactions affect consumers' perceptions and behaviors. This study is one of the first that points to specific mediators (i.e., parasocial relationships and self-disclosure) of social media effects on celebrity endorsement. The findings suggest that the inclusion of the two interpersonal relationship concepts to the research model enables researchers to better explain why or how social media interactions have positive/negative or direct/indirect effects on celebrity endorsement. Therefore, celebrity endorsement researchers should consider using these relatively unexplored variables when examining the effectiveness of celebrity endorsement.

To the best of our knowledge, this research is the first to demonstrate that self-disclosure is an important predictor of parasocial relationships. Whereas parasocial relationships in a traditional media environment are determined primarily by controlled and scripted images of celebrities, consumer–celebrity relationships in a social media environment can be characterized as more intimate, reciprocal, and interpersonal. As a result of this, consumers on social media expect personal, honest, and authentic communication from celebrities when building parasocial relationships with them. This phenomenon points to the significant role of self-disclosure in understanding parasocial relationships. We believe that parasocial relationship research can be benefited by incorporating interpersonal relationship concepts, such as self-disclosure, in order to reflect the changing nature of celebrity–consumer relationships in a social media context.

Taken together, the findings suggest that the technological characteristics of new media have significantly changed the nature of consumer–celebrity interactions, making them more interactive, complex, and dynamic. We believe that our research approach focusing on the qualitative characteristics of consumer–celebrity relationships can give insights to celebrity endorsement research in a new media landscape.

The results have several important implications for practitioners. First, the findings suggest useful guidelines for endorser selection and management strategies in the social media era. According to Nielsen's report (Newswire, 2011), 64% of adult US Internet users who follow a celebrity also follow a brand, indicating that celebrity fans are potential brand buyers. Therefore, it is critical to know what kind of endorsers can turn fans into customers. The findings of this study indicate that the effectiveness of celebrity endorsement depends not only on the celebrity characteristics (e.g., physical attractiveness, popularity) in question, but also on the quality of celebrity–consumer relationships, such as parasocial relationships and perceived self-disclosure. Therefore, endorser selection strategies should include the celebrity's capability to build and maintain intimate and personal bonds with fans. Besides the sheer number of fans following a celebrity on social media, a communication style that is conversational, responsive, and direct should be considered as an important endorser selection criterion.

To capitalize on the relational aspects of consumer–celebrity relationships on social media, marketers provide consumers with an avenue through which to directly interact with celebrities. In that respect, marketers should be aware of the capacities of various social media platforms and applications in creating immediacy, interactivity, intimacy, and honesty. Social media tools, such as vlogs, audio/video chats, and podcasts, may be effective in creating parasocial relationships. Some platforms that enable real-time interactions add realism and authenticity to the interactions, which also helps in the formation and reinforcement of parasocial relationships.

Second, it is important to note that self-disclosure is critical in parasocial relationships between consumers and celebrities. Social media messages that lack self-disclosure may create distant, unfriendly,



and, more importantly, untrustworthy images of a celebrity. Currently, many celebrities use social media mainly for self-promotion, and many celebrities' social media accounts are managed by social media teams or ghost writers (Cohen & Tyler, 2016). However, generic and impersonal social media messages cannot humanize celebrity–consumer interactions. For example, a fan noticed that a tweet sent from Mark Wahlberg's account was written in a third person voice. Therefore, marketers should be cautious about the ways in which celebrity social media accounts are managed.

Finally, the findings provide empirical evidence that social media interactions have a tangible impact on purchase intention through mediating variables. Typical social media marketing strategies tend to focus on employing social media as a communication channel for product information, promotion and events, and marketing messages. We suggest that marketers should also consider developing effective strategies for the fostering of friendly celebrity–consumer interactions on social media and include this as an important component of overall social media marketing strategies.

## **LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

Certain limitations of this study are worth noting. First of all, the study is based on cross-sectional data. Though we employed an SEM technique (a causal modeling approach), the findings are based on correlational analyses, making it difficult to establish causality. We, therefore, suggest that future studies should employ different research designs, such as longitudinal studies, experimental research, or a multimethod approach, in order to further validate the findings of this study. For example, an experimental design could manipulate the level of self-disclosure in terms of breadth and depth to see the relative importance of the two attributes on source credibility. Also, a longitudinal study can shed light on whether or not parasocial relationships are affected by the length of social media use.

We used a voluntary response sample of media viewers who identified themselves as fans of particular media figures. Voluntary response samples tend to oversample people who have strong opinions and particular attitudes, and thus may not be representative of the study population. Additionally, the present study is limited in that its data were gathered through an online survey. Although our study represents a sufficient sample size ( $N = 400$ ), the external validity of online samples remains a problem. Since there are no central registries of fans with which create a reliable sampling frame, this limitation may be inevitable. The findings of the present study should be further validated by research employing a variety of sampling strategies and frames.

The study context, Singapore, can be a potential threat to external validity because cultural or social factors inherent to Singapore might have played a role in the context of this study. For instance, Pornpitakpan (2004b) reported cultural difference in the effects of the attractiveness and trustworthiness of endorsers on persuasion. She explained that being part of a highly collectivistic society, Singaporeans tend to value these two traits more than American consumers. The findings that source trustworthiness has positive effects on brand credibility and purchase intention may, therefore, be attributed to the characteristics of the sample employed. Future studies should be conducted using samples in other countries/cultures to check the generalizability of the findings of the present study.

The present study used a medium-level involvement product (i.e., organic juice). Therefore, the findings may be limited to products of a certain level of involvement. High-involvement (e.g., cars) or low-involvement products (e.g., toilet paper) can be tested in future studies to examine the role of involvement and to provide greater external validity. Similarly, because we used organic juice in the advertisement, it is possible that the respondents considered the fit between the endorser and the fictitious brand when

answering the questions. Future studies may control for the effect of product–endorser fit on the celebrity endorsement.

### Acknowledgments

This study was funded through a research grant (C207/MSS12B010) from the Office of Research, Singapore Management University.

### APPENDIX 1

A Sample of the Mock-Up Advertisement Featuring a Korean Celebrity



## APPENDIX 2: Survey Items and Descriptive Statistics

Social media interactions ( $M = 2.98$ ,  $SD = 1.47$ ; 5-point Likert scale)

- I interact with [celebrity's name] on Twitter.
- I interact with [celebrity's name] on Facebook.

Self-disclosure ( $M = 5.23$ ,  $SD = 1.15$ ; 7-point Likert scale)

- [celebrity's name] reveals himself/herself.
- [celebrity's name] shares his/her personal feelings with his/her fans.
- [celebrity's name] is honest about his/her feelings or opinions.

### Parasocial Relationships

*Friendship* ( $M = 5.33$ ,  $SD = 1.10$ ; 7-point Likert scale)

- [celebrity's name] makes me feel comfortable, as if I am with a friend.
- I would like to have a friendly chat with [celebrity's name].
- If [celebrity's name] were not a celebrity, we would have been good friends.
- 

*Understanding/identification* ( $M = 4.30$ ,  $SD = 1.40$ ; 7-point Likert scale)

- I think I understand [celebrity's name] quite well.
- When [celebrity's name] behaves in a certain way, I know the reasons for his/her behavior.
- I can feel [celebrity's name]'s emotions in certain situations.
- [celebrity's name] seems to understand the kinds of things I want to know.
- [celebrity's name] reminds me of myself.
- I can identify with [celebrity's name].
- 

Source trustworthiness ( $M = 3.81$ ,  $SD = 0.73$ ; 5-point bipolar semantic scale)

- [celebrity's name] is insincere/sincere.
- [celebrity's name] is undependable/dependable.
- [celebrity's name] is dishonest/honest.
- [celebrity's name] is unreliable/reliable.
- [celebrity's name] is untrustworthy/trustworthy.
- 

Brand credibility ( $M = 3.48$ ,  $D = 0.59$ ; 5-point Likert scale)

- This brand reminds me of someone who is competent and knows what he/she is doing.
- This brand has the ability to deliver what it promises.
- This brand delivers what it promises.
- This brand has believable claims about the product.
- This brand has a name you can trust.
- 

Intentions ( $M = 5.02$ ,  $SD = 1.27$ ; 7-point Likert scale)

- How likely is it that you would consider purchasing the product shown in the advertisement above?
- It is likely that this brand would be my first choice when considering purchasing juice.
- I would not buy another brand of juice if this brand was available at the store.

## References

- Aaker, J. L. (1997). Dimensions of brand personality. *Journal of Marketing Research*, 34, 347–356.
- Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships*. New York, NY: Holt, Rinehart & Winston.
- Amos, C., Holmes, G., & Strutton, D. (2008). Exploring the relationship between celebrity endorser effects and advertising effectiveness: A quantitative synthesis of effect size. *International Journal of Advertising*, 27(2), 209–234.
- Atkin, C., & Block, M. (1983). Effectiveness of celebrity endorsers. *Journal of Advertising Research*, 2, 57–61.
- Auter, P. J. (1992). Psychometric: TV that talks back—An experimental validation of a parasocial interaction scale. *Journal of Broadcasting & Electronic Media*, 36, 173–181.
- Auter, P. J., & Palmgreen, P. (2000). Development and validation of a parasocial interaction measure: The Audience-Persona Interaction scale. *Communication Research Reports*, 17, 79–89.
- Baek, T. H., & King, K. W. (2011). Exploring the consequences of brand credibility in services. *Journal of Services Marketing*, 25, 260–272.
- Bagozzi, R. P. (1981). Attitudes, intentions, and behavior: A test of some key hypotheses. *Journal of Personality and Social Psychology*, 41, 607–627.
- Ballentine, P. W., & Martin, A. S. (2004). Forming parasocial relationships in online communities. *Advances in Consumer Research*, 32, 197–201.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Bollen, K. A., & Long, J. S. (1993). *Testing structural equation models*. Newbury Park, CA: Sage.
- Bollmer, J. M., Milich, R., Harris, M. J., & Maras, M. A. (2005). A friend in need: The role of friendship quality as a protective factor in peer victimization and bullying. *Journal of Interpersonal Violence*, 20, 701–712.
- Boulding, W., & Kirmani, A. (1993). A consumer-side experimental examination of signaling theory: Do consumers perceive warranties as signals of quality? *Journal of Consumer Research*, 20, 111–123.
- Brown, W. J., Basil, M. D., & Bocarnea, M. C. (2003). The influence of famous athletes on health beliefs and practices: Mark McGwire, child abuse prevention, and androstenedione. *Journal of Health Communication*, 8, 41–57.
- Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre-and early adolescence: The development and psychometric properties of the Friendship Qualities Scale. *Journal of Social and Personal Relationships*, 11, 471–484.

- Buttle, J. E., Raymond, H., & Danziger, S. (2000). The advantage of a famous face: Particularly rapid configural visual processing. *International Journal of Psychology*, 35, 1296–1306.
- Cassel, C., Hackl, P., & Westlund, A. H. (1999). Robustness of partial least-squares method for estimating latent variable quality structures. *Journal of Applied Statistics*, 26, 435–446.
- Chan, K., Leung Ng, Y., & Luk, E. K. (2013). Impact of celebrity endorsement in advertising on brand image among Chinese adolescents. *Young Consumers*, 14, 167–179.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, 295, 295–336.
- Choi, S. M., Lee, W. N., & Kim, H. J. (2005). Lessons from the rich and famous: A cross-cultural comparison of celebrity endorsement in advertising. *Journal of Advertising*, 34, 85–98.
- Chu, W., & Chu, W. (1994). Signaling quality by selling through a reputable retailer: An example of renting the reputation of another agent. *Marketing Science*, 13, 177–189.
- Cohen, E. L., & Tyler, W. J. (2016). Examining perceived distance and personal authenticity as mediators of the effects of ghost-tweeting on parasocial interaction. *Cyberpsychology, Behavior, and Social Networking*, 19, 342–346.
- Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass Communication & Society*, 4, 245–264.
- Cole, T., & Leets, L. (1999). Attachment styles and intimate television viewing: Insecurely forming relationships in a parasocial way. *Journal of Social and Personal Relationships*, 16, 495–511.
- Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, 116, 457–475.
- Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management*, 37, 39–67.
- Cozby, P. C. (1973). Self-disclosure: A literature review. *Psychological Bulletin*, 79, 73–91.
- Craig, C. S., & McCann, J. M. (1978). Assessing communication effects on energy conservation. *Journal of Consumer Research*, 5, 82–88.
- Daily Mail Reporter (2011). Britney Spears, Justin Bieber and Ellen Degeneres join thousands to ‘show their hearts’ in Twitter campaign for Berry children after crash kills parents. Retrieved July 1, 2016, from <http://www.dailymail.co.uk/news/article-2019872/Britney-Spears-Justin-Bieber-Ellen-Degeneres-join-Twitter-campaign-Berry-children.html>.
- Daily Mail Reporter (2013). They earn how much? New list reveals Jennifer Aniston gets \$5m a movie while beyonce paid \$50m for drinking peps. Retrieved July 06, 2016, from <http://www.dailymail.co.uk/tvshowbiz/article-2420258/Jennifer-Aniston-gets-5m-movie-Beyonce-paid-50m-drinking-Pepsi.html>.

- Dean, D. H., & Biswas, A. (2001). Third-party organization endorsement of products: An advertising cue affecting consumer prepurchase evaluation of goods and services. *Journal of Advertising*, 30, 41–57.
- Derlega, V., Winstead, B., Wong, P., & Greenspan, M. (1987). Self-disclosure and relationship development: An attributional analysis. In M. E. Roloff & G. R. Miller (Eds.), *Interpersonal processes: New directions in communication research* (pp. 172–187). Thousand Oaks, CA: Sage.
- Dholakia, R. R., & Sternthal, B. (1977). Highly credible sources: Persuasive facilitators or persuasive liabilities? *Journal of Consumer Research*, 3, 223–232.
- Dibble, J. L., Levine, T. R., & Park, H. S. (2012). The unidimensional relationship closeness scale (URCS): Reliability and validity evidence for a new measure of relationship closeness. *Psychological Assessment*, 24, 565–572.
- Erdem, T., & Swait, J. (1998). Brand equity as a signaling phenomenon. *Journal of Consumer Psychology*, 7, 131–157.
- Erdem, T., & Swait, J. (2004). Brand credibility, brand consideration, and choice. *The Journal of Consumer Research*, 31, 191–198.
- Erdogan, B. Z. (1999). Celebrity endorsement: A literature review. *Journal of Marketing Management*, 15, 291–314.
- Erdogan, B. Z., & Baker, M. J. (2000). Towards a practitioner-based model of selecting celebrity endorsers. *International Journal of Advertising*, 19, 25–43.
- Fehr, B. A. (1996). *Friendship processes*. Thousand Oaks, CA: Sage Publications.
- Grant, A. E., Guthrie, K. K., & Ball-Rokeach, S. J. (1991). Television shopping a media system dependency perspective. *Communication Research*, 18, 773–798.
- Greene, K., Derlega, V. J., & Mathews, A. (2006). Self-disclosure in personal relationships. In A. Vangelisti & D. Berلمان (Eds.), *The Cambridge handbook of personal relationships* (pp. 409–427). New York: Cambridge University Press.
- Hartmann, T., & Goldhoorn, C. (2011). Horton and Wohl revisited: Exploring viewers' experience of parasocial interaction. *Journal of Communication*, 61, 1104–1121.
- Hodges, E. V., Boivin, M., Vitaro, F., & Bukowski, W. M. (1999). The power of friendship: Protection against an escalating cycle of peer victimization. *Developmental Psychology*, 35, 94–101.
- Horton, D., & Wohl, R. R. (1956). Mass communication and para-social interaction: Observations on intimacy at a distance. *Psychiatry*, 19, 215–229.
- Hovland, C. I., & Weiss, W. (1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly*, 15, 635–650.
- Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and persuasion; psychological studies of opinion change*. New Haven: Yale University Press.

- Hoyle, R. H. (2011). *Structural equation modeling for social and personality psychology*. Thousand Oaks, CA: Sage Publications Ltd.
- Joinson, A. N. (2001). Self-disclosure in computer-mediated communication: The role of self-awareness and visual anonymity. *European Journal of Social Psychology*, 31, 177–192.
- Kamins, M. A. (1990). An investigation into the “match-up” hypothesis in celebrity advertising: When beauty may be only skin-deep. *Journal of Advertising*, 19, 4–13.
- Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, 25, 57–78.
- Kemp, E., & Bui, M. (2011). Healthy brands: Establishing brand credibility, commitment, and connection among consumers. *Journal of Consumer Marketing*, 28, 429–437.
- Kim, H., Ko, E., & Kim, J. (2015). SNS users’ para-social relationships with celebrities: Social media effects on purchase intentions. *Journal of Global Scholars of Marketing Science*, 25, 279–294.
- Kim, J., & Song, H. (2016). Celebrity's self-disclosure on Twitter and parasocial relationships: A mediating role of social presence. *Computers in Human Behavior*, 62, 570–577.
- Kirmani, A. (1997). Advertising repetition as a signal of quality: If it's advertised so much, something must be wrong. *Journal of Advertising*, 26, 77–86.
- Knoll, J., Schramm, H., Schallhorn, C., & Wynistorf, S. (2015). Good guy vs. bad guy: The influence of parasocial interactions with media characters on brand placement effects. *International Journal of Advertising*, 34, 720–743.
- Koernig, S. K., & Boyd, T. C. (2009). To catch a tiger or let him go: The match-up effect and athlete endorsers for sport and non-sport brands. *Sport Marketing Quarterly*, 18, 25–37.
- Labrecque, L. I. (2014). Fostering consumer–brand relationships in social media environments: The role of parasocial interaction. *Journal of Interactive Marketing*, 28, 134–148.
- Lafferty, B. A., & Goldsmith, R. E. (1999). Corporate credibility's role in consumers’ attitudes and purchase intentions when a high versus a low credibility endorser is used in the ad. *Journal of Business Research*, 44, 109–116.
- Lafferty, B. A., Goldsmith, R. E., & Newell, S. J. (2002). The dual credibility model: The influence of corporate and endorser credibility on attitudes and purchase intentions. *Journal of Marketing Theory and Practice*, 10, 1–12.
- Laurenceau, J., Barrett, L., & Pietromonaco, P. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology*, 74, 1238–1251.
- Lim, C. M., & Kim, Y. K. (2011). Older consumers’ TV home shopping: Loneliness, parasocial interaction, and perceived convenience. *Psychology & Marketing*, 28, 763–780.

- MacKinnon, D. P., Fairchild, A. J., & Fritz, M. S. (2007). Mediation analysis. *Annual Review of Psychology*, 58, 593–614.
- Marwick, A., & boyd, D. (2011). To see and be seen: Celebrity practice on Twitter. *Convergence: The International Journal of Research into New Media Technologies*, 17, 139–158.
- McCracken, G. (1989). Who is the celebrity endorser? Cultural foundations of the endorsement process. *Journal of Consumer Research*, 16, 310–321.
- McGuire, W. J. (1985). Attitudes and attitude change. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (3rd ed., Vol. 2, pp. 233–346). New York: Random House.
- Miller, F. M., & Laczniak, G. R. (2011). The ethics of celebrity-athlete endorsement. *Journal of Advertising Research*, 51, 499–510.
- Moore, D. L., Hausknecht, D., & Thamodaran, K. (1986). Time compression, response, opportunity, and persuasion. *Journal of Consumer Research*, 13, 85–99.
- Netemeyer, R., Krishnan, B., Pullig, C., Wang, G., Yagci, M. (2004). Developing and validating measures of facets of customer-based brand equity. *Journal of Business Research*, 57, 209–224.
- Newswire. (2011). Retrieved July 1, 2016, from <http://www.nielsen.com/us/en/insights/news/2011/online-celebrity-fans-more-likely-to-follow-brands.html>.
- Nguyen, M., Bin, Y. S., & Campbell, A. (2012). Comparing online and offline self-disclosure: A systematic review. *Cyberpsychology, Behavior, and Social Networking*, 15, 103–111.
- Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19, 39–52.
- Ohanian, R. (1991). The impact of celebrity spokespersons' perceived image on consumers' intention to purchase. *Journal of Advertising Research*, 31, 46–54.
- Parks, M. R., & Floyd, K. (1996). Making friends in cyberspace. *Journal of Communication*, 46, 80–97.
- Perse, E. M. (1990). Involvement with local television news cognitive and emotional dimensions. *Human Communication Research*, 16, 556–581.
- Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research*, 10, 135–146.
- Pornpitakpan, C. (2004a). The persuasiveness of source credibility: A critical review of five decades' evidence. *Journal of Applied Social Psychology*, 34, 243–281.
- Pornpitakpan, C. (2004b). The effect of celebrity endorsers' perceived credibility on product purchase intention: The case of Singaporeans. *Journal of International Consumer Marketing*, 16, 55–74.



- Praet, C. L. C. (2008). The influence of national culture on the use of celebrity endorsement in television advertising: A multi-country study. In Proceedings of the 7th International Conference on Research in Advertising (ICORIA), Antwerp, Belgium, s. 1. [CD-ROM].
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879–891.
- Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology*, 49, 95–112.
- Rubin, A. M., & Perse, E. M. (1987). Audience activity and soap opera involvement: A uses and effects investigation. *Human Communication Research*, 14, 246–268.
- Rubin, A. M., & Step, M. M. (2000). Impact of motivation, attraction, and parasocial interaction on talk radio listening. *Journal of Broadcasting & Electronic Media*, 44, 635–654.
- Rubin, A. M., Perse, E. M., & Powell, R. A. (1985). Loneliness, parasocial interaction, and local television news viewing. *Human Communication Research*, 12(2), 155–180.
- Seno, D., & Lucas, B. A. (2007). The equity effect of product endorsement by celebrities: A conceptual framework from a co-branding perspective. *European Journal of Marketing*, 41, 121–134.
- Shashidhar, A. (2008). Falling stars. Retrieved July 17, 2009, from <http://business.outlookindia.com/newolb/article.aspx?101517>.
- Shimp, T. A., & Andrews, J. C. (2012). Advertising promotion and other aspects of integrated marketing communications. Mason, OH: Cengage Learning.
- Silvera, D. H., & Austad, B. (2004). Factors predicting the effectiveness of celebrity endorsement advertisements. *European Journal of Marketing*, 38, 1509–1526.
- Solomon, M. R. (2006). Consumer behavior: Buying, having, and being. Upper Saddle River, NJ: Prentice Hall.
- Speck, P. S., Schumann, D. W., & Thompson, C. (1988). Celebrity endorsements-scripts, schema, and roles: Theoretical framework and preliminary tests. *Advances in Consumer Research*, Association for Consumer Research, 15, 69–76.
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87, 355–374.
- Spence, M. (1974). Competitive and optimal responses to signals: An analysis of efficiency and distribution. *Journal of Economic Theory*, 7, 296–332.
- Spry, A., Pappu, R., & Cornwell, T. B. (2011). Celebrity endorsement, brand credibility and brand equity. *European Journal of Marketing*, 45(6), 1–46.
- Spry, A., Pappu, R., & Cornwell, T. B. (2009). Celebrity endorsement, brand credibility and brand equity. *European Journal of Marketing*, 45, 882–909.

- Stern, B. B., Russell, C. A., & Russell, D. W. (2007). Hidden persuasions in soap operas: Damaged heroines and negative consumer effects. *International Journal of Advertising*, 26, 9–36.
- Sternthal, B., Phillips, L. W., & Dholakia, R. (1978). The persuasive effect of scarce credibility: A situational analysis. *Public Opinion Quarterly*, 42, 285–314.
- Stever, G. S., & Lawson, K. (2013). Twitter as a way for celebrities to communicate with fans: Implications for the study of parasocial interaction. *North American Journal of Psychology*, 15, 339–354.
- Swait, J., & Erdem, T. (2007). Brand effects on choice and choice set formation under uncertainty. *Marketing Science*, 26, 679–697.
- Sweeney, J., & Swait, J. (2008). The effects of brand credibility on customer loyalty. *Journal of Retailing and Consumer Services*, 15, 179–193.
- Tal-Or, N., & Cohen, J. (2010). Understanding audience involvement: Conceptualizing and manipulating identification and transportation. *Poetics*, 38, 402–418.
- Taylor, D. A., Gould, R. J., & Brounstein, P. J. (1981). Effects of personalistic self-disclosure. *Personality and Social Psychology Bulletin*, 7, 487–492.
- Tian, Q., & Hoffner, C. A. (2010). Parasocial interaction with liked, neutral, and disliked characters on a popular TV series. *Mass Communication and Society*, 13, 250–269.
- Tidwell, L. C., & Walther, J. B. (2002). Computer-mediated communication effects on disclosure, impressions, and interpersonal evaluations: Getting to know one another a bit at a time. *Human Communication Research*, 28, 317–348.
- Till, B. D., & Busler, M. (2000). The match-up hypothesis: Physical attractiveness, expertise, and the role of fit on brand attitude, purchase intent, and brand beliefs. *Journal of Advertising*, 29, 1–13.
- Till, B. D., Stanley, S. M., & Priluck, R. (2008). Classical conditioning and celebrity endorsers: An examination of belongingness and resistance to extinction. *Psychology & Marketing*, 25, 179–196.
- Tirole, J. (1990). *The theory of industrial organization*. Cambridge, MA: MIT Press.
- Tukachinsky, R. (2010). Para-romantic love and para-friendships: Development and assessment of a multiple parasocial relationships scale. *American Journal of Media Psychology*, 3, 73–94.
- Tyler, T. R. (2001). Why do people rely on others? Social identity and social aspects of trust. In K. S. Cook (Ed.), *Trust in society*. Russell Sage Foundation Series on Trust (Vol. 2, pp. 285–306). New York, NY: Russell Sage Foundation.
- Vogel, D. L., & Wester, S. R. (2003). To seek help or not to seek help: The risks of self-disclosure. *Journal of Counseling Psychology*, 50, 351–361.
- Wang, X., & Yang, Z. (2010). The effect of brand credibility on consumers' brand purchase intention in emerging economies: The moderating role of brand awareness and brand image. *Journal of Global Marketing*, 23, 177–188.

Wheeless, L. R., & Grotz, J. (1977). The measurement of trust and its relationship to self-disclosure. *Human Communication Research*, 3, 250–257.

Wu, C., & Shaffer, D. R. (1987). Susceptibility to persuasive appeals as a function of source credibility and prior experience with the attitude object. *Journal of Personality and Social Psychology*, 52, 677–688.

Yang, J. (2012). The Korean Wave (Hallyu) in East Asia: A comparison of Chinese, Japanese, and Taiwanese audiences who watch Korean TV dramas. *Development and Society*, 41, 103–147.

Yoo, B., & Donthu, N. (2001). Developing and validating a multidimensional consumer-based brand equity scale. *Journal of Business Research*, 52(1), 1–14.

Yoon, K., Kim, C. H., & Kim, M. S. (1998). A cross-cultural comparison of the effects of source credibility on attitudes and behavioral intentions. *Mass Communication and Society*, 1, 153–173.