To Tweet or Not to Tweet: Explaining Fan-Celebrity Interaction on Twitter

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This research sought to explain why individuals attempt to engage with celebrities through Twitter. Hypotheses derived from Social Penetration Theory, parasocial relationships, social cache, individual differences, and personality were tested in two studies. Survey results of Study 1 (N =349) found that a desire to interact arose out of a combination of three factors: (1) communication depth, (2) parasocial relationships, and (3) social cache. Social cache was further validated through an experimental design (N = 208) that used a 2x2x2 design with depth, parasocial relationships, and social cache to assess why some individuals engage with celebrities through Twitter. Both social cache and parasocial relationships predicted more attempts to engage with celebrities. Results are discussed in terms of fandom and new technology.

With millions of active daily users, Twitter has become a part of everyday life for many individuals both young and old (Duggan, Ellison, Lampe, Lenhart, & Madden, 2015). Twitter offers the opportunity to connect through 140-character information bursts, or tweets, as well as the chance to share pictures, links, and videos. Twitter also advertises that someone does not have to actually engage in "tweeting" to enjoy Twitter; they can follow other users' on the site to be entertained and/or informed (*About Twitter*, 2016). The most followed Twitter users are often individuals who are a celebrity or public figure (*Twitter Counter*, 2016).

The high number of followers for public figures is not all that surprising. Twitter provides the opportunity for interaction between celebrities and fans, transforming access and giving a glimpse into the everyday lives of these public figures. Indeed, using Twitter can create an emotional connection for fans with celebrities, because the tweets seem to come *from* that person (despite often being written by someone else) rather than being reported *about* that celebrity through a news source (Marwick & boyd, 2011). This same effect has been suggested about political candidates' use of social media, with Utz (2009) finding that political candidates who engaged with potential voters through social network sites were viewed more favorably compared to those who did not do so. Perceptions of

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connection with celebrities is not a new concept (Horton & Wohl, 1956). However, the difference between sending fan mail to a celebrity and hoping for a letter (as was done in the past) versus sending a quick tweet that might get a response highlights not only the ease but also the speed with which celebrity interaction can potentially occur.

Phelps (2011) argues that the use of social media by celebrities is a new form of marketing that creates this "illusion of closeness." Twitter pulls fans closer to celebrities while at the same time encouraging the consumer side of the relationship through their personal brand awareness. Bennett (2014) highlights how the popular singer Lady Gaga has used social media as a platform for causes she cares about (e.g., gay rights, youth homeless shelters, HIV/AIDS awareness). Lady Gaga often shares fan-created videos and posts videos speaking directly to their participation in the causes she cares about, illustrating how a celebrity can use social media to connect with fans on another level (Bennett, 2014). Similarly, Beer (2008) has discussed the use of the early social networking site MySpace by musician Jarvis Cocker, specifically how Cocker was able to build "friendships" online, creating a fandom that followed his every move because he was so engaging. Of course, such engagement is not characteristic of all celebrities. Indeed, many rely on their management to post for them or rarely post to social media, despite having several million followers.

The present investigation is focused on how followers (fans) engage with celebrities through Twitter. Our primary research question is: What motivates someone to reach out to a celebrity through Twitter?

This study explores three categories of motivations for engaging with a celebrity on Twitter. One possible reason is that the fan feels a connection to the celebrity through the content of his or her tweets and Twitter account. Drawing from Social Penetration Theory (SPT) (Altman & Taylor, 1973), we argue that the perceived breadth and depth of celebrity tweets will increase the likelihood that the fan feels a need to reciprocate those disclosures (Barak & Gluck-Ofri, 2007). Along those same lines, we investigate parasocial relationships, or the association fans have with celebrities (Laken, 2009). Although one-sided in nature, fans of a celebrity often develop feelings toward and a sense of connection with that celebrity and/or the character he or she represents (Phelps, 2011; Ponce de Leon, 2002). Those individuals who experience a stronger parasocial relationship may use Twitter as a way to strengthen that bond, either through starting a conversation or by responding to a post made by a particular celebrity (Lee & Jang, 2013).

The second class of explanations focuses on when fans feel that being acknowledged by that celebrity is of value or that it has

social cache. Here, fans may be more likely to try to engage with celebrities through a tweet in hopes of being able to publicly demonstrate their acknowledgment from the celebrity. Recuero, Amaral, and Monteiro (2012) discuss a similar concept, social capital, discussing how fandoms seek the opportunity to share with each other responses from idols received on Twitter. Social cache is distinct in that it is the idea of a status symbol—"look, I got X to notice me!" In that sense, it is a subset of the overall discussion of social capital, which can exist in a variety of forms.

Finally, we consider the role of three personality traits for tweeting at a celebrity, which have been previously documented in the literature: (1) affiliative tendency (Lee & Jang, 2013), (2) openness, and (3) extroversion (Quercia, Kosinski, Stillwell, & Crowcroft, 2011).

Comprehensively assessing the influences of engaging celebrities is an important step in understanding fan culture and social networking sites. While past studies have identified possible reasons for engaging with celebrities through Twitter, the present multi-study investigation can identify the strongest predictors of this behavior, a finding useful to both researchers and celebrities as the use of social media continues to grow in society.

Twitter Use

Twitter consists of tweets sharing text, pictures, and/or links to videos or articles on the Internet. A limit of 140 characters per post promotes brevity. Twitter allows for postings of photos, on-the-ground reports, and quick replies to other users. While the initial audience of a tweet may be small, a retweet (sharing an original tweet) can spread the word to multiple networks on the site, which allows anyone with a public account to grow the reach of his or her audience.

Twitter boasts using tweets to not only communicate with friends and family but anyone, with the main about page stating, "See what they see. Go where they go. Experience life as an astronaut, see what moves a musician, or gain insight from the Dalai Lama" (*About Twitter, 2016*). Twitter users are presented with a constantly-updating stream of posts ranging from news stories to humor to musings about life, depending on whom they choose to "follow" on the site. Twitter has a directed friendship mode through which users are able to choose what Twitter accounts to follow, and in turn, users have their own group of followers. That said, just because a user "follows" a celebrity, it does not mean that celebrity will "follow" them back. For instance, while Katy Perry has over 89 million followers, she only follows 159 people on Twitter herself (*Twitter Counter*, 2016). What this means is while she can receive notifications of tweets

directly sent "@" her, only a limited number of tweets from users regularly appear in her own Twitter feed.

For users who are not being followed by celebrities (i.e., most Twitter users), the way to direct a tweet to them is to use the "@" symbol. Consider this example of a potential tweet, "Omg I can't wait to see @katyperry at her concert tonight!!!" Here, the person is tweeting directly at Katy Perry by using the "@" symbol and her username on Twitter. The tweet will appear publically on the users' page and can also send an alert to Katy Perry that she's been "tweeted at" through her account. While there is no requirement of reciprocity for tweets when a celebrity is involved (Marwick & boyd, 2011), users often attempt to get a response from celebrity Twitter users, by either instigating a conversation or responding to tweets made by the celebrity.

Marwick and boyd (2011) argue that celebrities can create a sense of intimacy with their fans by giving followers on Twitter "backstage" access to their lives through posting personal pictures, responding to rumors, and sharing information about their everyday lives. They note, "Although Twitter conversations are mediated, they appear off-the-cuff, contributing to a sense that the reader is seeing the real, authentic person behind the 'celebrity'" (Marwick & boyd, 2011, p. 149). The potential result is the creation of a bond between followers and the celebrity, wherein fans start to see them as more "real" because of this "backstage" access. In turn, users feel compelled to engage with the celebrity, sharing their own thoughts and opinions. The potential reciprocal nature of the relationship formed between Twitter users and celebrities may suggest that followers see Twitter interactions as a developing relationship over time. Bennett's (2014) work on the Lady Gaga fandom shows how a user might respond to actions from the celebrity, creating a sense of shared creation with fans and celebrity.

Parasocial Relationships

It is worth noting that more often than not, tweets receive no response, leaving a fan to interpret the lack of response however they choose (Kehrberg, 2015). Although, sometimes simply reaching out to a celebrity, even without a response, can be enough for a fan. Worldwide, people have a fascination with celebrities, and popular culture is often dominated by celebrity influence (McCafferty, 2005). In one study, 75% of college students reported having had a strong attraction to more than one celebrity, and 90% admitted to having a celebrity idol at one point in their life (Boon & Lomore, 2001). As fans experience a greater sense of relational intimacy with mediated characters, they develop a parasocial relationship, which describes

the unreciprocated feelings between media figures and audience members (Horton & Wohl, 1956).

Typically, the parasocial relationship has been considered very one-sided (Rubin, Perse, & Powell, 1985). However, personalized contact with celebrities via Twitter (e.g., a retweet, response, or favorite) breaks down barriers between fans and celebrities, offering the potential for the relationship to solidify even more in the mind of the fan. Ultimately, fans who follow and believe they are developing relationships with celebrities they follow on Twitter are engaging in a form of parasocial interaction that can lead to this sense of a relationship with a celebrity. Through Twitter, celebrities can disclose personal information about themselves, and this interaction could allow for greater intimacy, further validating that parasocial relationship in the mind of the fan (Marwick & boyd, 2011). The parasocial relationship is enhanced when fans can imagine what the characters or celebrities would do in particular situations and interactions as they get more and more glimpses into their everyday lives (Papacharissi & Rubin, 2000). Even a small degree of seemingly-personalized contact such as getting a tweet favorited can greatly reinforce a parasocial connection (Borison, 2014). Accordingly, we offer the following hypothesis:

> H1: The likelihood of responding to a celebrity tweet will be positively associated with the strength of a parasocial relationship with that celebrity.

Social Penetration Theory

The next possible explanation for engagement with celebrities through Twitter can be understood by the Social Penetration Theory (SPT) and the process of self-disclosure. Research shows that willingness to reveal one's feelings and thoughts to another is a basic part of developing close relationships (Altman & Taylor, 1973). As posited by SPT, as relationships develop, communication between partners changes from fairly shallow and superficial to deeper and more intimate. Gradually, individuals share more details (depth) and discuss more things (breadth) with their partner, which can increase closeness and strengthen the tie (Altman & Taylor, 1973). SPT suggests that this process is typically reciprocal; as one individual discloses personal information, the other person tends to disclose personal information in return (Altman & Taylor, 1973).

Applications of SPT to computer-mediated contexts have shown that such disclosures can be even more intimate than those in face-to-face communication (Tidwell & Walther, 2006). Recent research on Twitter and uses and gratifications suggests that active use of the site (logging on, tweeting) gratifies an individual's need for camaraderie (Chen, 2011). More specifically, Chen (2011) found

that using the "@" to direct a message as a reply to a user on the site plays an important role in gratifying this need for connection. Users feel compelled to engage with others on the site as a way to form relationships. When applied to the present investigation, it is possible that as celebrities reveal more in-depth and personal information via tweets, fans might feel the need to respond through reciprocal disclosure to develop the relationship and enhance the feeling of closeness and the bond that they feel as a result of engaging online. Beer (2008) argues for the "perception of proximity," which, like the illusion of closeness, shows how sharing information through social media could feel like a personal self-disclosure.

Parasociality may not be an accurate description of the "relationship," since fans and celebrities can and do interact via social media (Baym, 2012; Marwick & boyd, 2011). What is different about the Twitter relationship from a traditional parasocial relationship is that Twitter gives celebrities the ability to read and reply to fans. The potential for interaction elevates the relationship to a new level outside of just the mind of the fan, making it more than just parasocial for some fans (Marwick & boyd, 2011; Recuero et al., 2012) and for the celebrity (Bennett, 2014; Baym, 2012). Thus, we offer the following hypothesis:

> H2: The likelihood of responding to a celebrity tweet will be positively associated with the perceived depth and breadth of the celebrity's tweets.

Social Cache

Compared to other means of connecting with celebrities (e.g., going to a show or event, sending a letter), Twitter is unique in that there is the potential for an immediate response from that person. There are multiple ways to get that sense of interaction. For instance, the celebrity can re-post something a follower has posted, they can "favorite" a fan's tweet, or they can respond to a tweet sent to them by a follower (Marwick & boyd, 2011). Although celebrities can have upwards of millions of Twitter followers and they will probably not read every fan's comment, the possibility remains, which is enough for some fans (Mycynek, 2010). Some fans may crave recognition from other fans and being responded to by a celebrity is a form of legitimation as a fan (Recuero et al., 2012). This recognition and legitimation fosters reputation and popularity, which are types of social capital that can benefit fans in both their online and offline social networks (Recuero, Araújo & Zago, 2011).

We have defined this act as *social cache*, which is the desire to be individually singled out by a celebrity through a reply or retweet so that an individual can show other members of their social network that a celebrity recognized him or her. Social cache could be

even further enhanced if spread by the retweets of Twitter followers. Accordingly, the potential audience for any one tweet or @reply by a celebrity is large, making it a low cost, high reward opportunity for a follower. As such, we proffer the following hypothesis:

> H3: The likelihood of responding to a celebrity tweet will be positively associated with a desire for social cache in relation to that celebrity.

Individual Differences

When testing explanations for behaviors, it is important to consider such possible individual differences as personality traits. Past research suggests that three traits (i.e., affiliative tendency, extroversion, and openness) relate to Twitter use (Lee & Jang, 2013; Quercia et al., 2011). Affiliative tendency is the positive expectations and experiences a person has in the relationships they maintain (Mehrabian, 1970). As Mehrabian (1976) notes, individuals who are high in affiliative tendency "tend to see themselves as being more similar to others" (p. 204). Past research on Twitter and parasocial relationships suggests that affiliative tendency plays a moderating role for interactions. Lee and Jang (2013) found that individuals low in affiliative tendency were more likely to engage through Twitter and see it as a two-way interaction with the celebrity, compared to individuals high in affiliative tendency. These authors suggest that one reason for this finding may be that individuals who are high in affiliative tendency seek interpersonal contact and were disappointed by tweets, resulting in a decreased perception of a parasocial relationship with the celebrity. Conversely, those low in affiliative tendency might view tweets as a form of interpersonal contact (regardless of content) and feel closer to the celebrity a result.

Extroverted Twitter users are both more likely to have a high number of followers and are more likely to follow a larger number of people (Quercia et al., 2011). Extroversion is marked by a desire to socialize with others, and Twitter is one way of doing so. In the context of following celebrities, it stands to reason that an extroverted user may be more likely to tweet at celebrities through Twitter.

In addition to extroversion, social Twitter use is correlated with openness (Hughes, Rowe, Batey, & Lee, 2012; Quercia et al., 2011). Individuals who use Twitter to interact with celebrities could be higher in openness than those who do not engage with celebrities. Accordingly, we offer these hypotheses:

> H4a: The likelihood of responding to a celebrity tweet will be negatively associated with affiliative tendency.
> H4b: The likelihood of responding to a celebrity tweet will be positively associated with extroversion.

H4c: The likelihood of responding to a celebrity tweet will be positively associated with openness.

Study One

Method

Participants. Study participants (N = 349) were recruited from communication courses at a large Midwestern university and given partial course credit (less than .5% of the course total) in exchange for participation. To be eligible for the study, participants needed to already have a Twitter account and to follow at least one person on Twitter who they would view as a celebrity. Participants primarily identified as female (69.3%), and fewer as male (30.7%). The mean age for participants was 19.44 (SD = 1.82, range 18-38, mdn = 20). Most participants identified as Caucasian (82.2%), then Multi-Ethnic (7.4%), Hispanic/Latino(a) (3.7%), Asian (3.5%), and Black/African-American (3.2%). Participants as a whole reported using Twitter an average of at least 2-3 times a week.

Procedures. Participants were provided with an online information statement outlining the purpose of the study. They were then asked to log in to their Twitter account and choose the first person they already followed who met the following criteria: *This person is considered "famous," perhaps they are an actor or actress, a public official, an athlete or musician. They run their own account, and you would call them a celebrity if asked by someone else*. After selecting someone, participants were asked to first identify what that person was famous for being or doing (e.g., athlete, actor) and asked to provide the text of that person's ten most recent tweets. Finally, participants completed a series of items regarding their Twitter use, their interactions through Twitter with the celebrity they chose for the study, and personality traits.

Measures

Perceived breadth and depth were adapted from Parks and Floyd's (1996) scales for measuring the development of online relationships. All items were measured on a 7-point Likert-type scale. Breadth consisted of the following three items: (1) *This person's communication on Twitter covers issues that go well beyond the topic of any one particular area;* (2) *This person's communication on Twitter ranges over a wide variety of topics; and* (3) *This person's communication on Twitter is limited to just a few specific topics* (reverse coded). The measure was reliable (α = .81). Depth was also reliable (α = .75) and consisted of four items: (1) *This person discloses just about anything on Twitter*; (2) *This person discloses*

personal information about themselves that could not have come from anyone else on Twitter; *This person's communication stays on the surface of most topics on Twitter* (reverse coded); and (4) *This person would never share intimate or personal information on Twitter* (reverse coded).

Parasocial relationship was measured using an adapted version of Auter and Palmgreen's (2000) Audience-Persona Interaction Scale. The scale was adapted to include sixteen items as opposed to the original twenty-two items. This decision was made in order to eliminate the group sub-scale, which did not apply to all celebrities on Twitter, since the original version of the scale measured characters on TV shows. An exploratory factor analysis (EFA) with promax rotation and principle axis factoring confirmed that the three remaining factors were separate constructs. Each of the three factors, *interest* ($\alpha = .77$), *identify* ($\alpha = .90$), and *problem* ($\alpha = .91$), obtained acceptable levels of reliability. All items were measured on a 7-point Likert-type scale. Examples of items from each factor of the scale include *I care about what happens to this person* and *I would like to meet this person* (interest); *This person reminds me of myself* (identify); and *I like the way this person handles problems* (problem).

Social cache was a new measure. The conceptual definition was an individual's desire to engage with a celebrity so as to gain recognition from his or her own social network, making it distinct from the audience-perception scale which aligns with a personal connection to a celebrity figure. Eight original items were written, and all items were measured on a 7-point Likert-type scale. To explore the dimensionality of the measure, an EFA was conducted using principal axis factoring and promax rotation. The first factor, which included six of the original items, had an eigenvalue of 4.39 and explained 55% of the variance. Two items were subsequently removed: *I am likely to respond to tweets from this person* and *It is worthwhile to respond to tweets written by this person*. The final six items achieved high reliability ($\alpha = .87$): (1) *I tweet at this person so I can show my friends if I get retweeted*; (2) *I would feel fulfilled if this person responded to one of my tweets*; (3) *I tweet at this person because I want them to tweet back at me*; (4) *I think it is important to get retweeted by this person*; (5) *If this person tweeted at me I would share it with my friends*; and (6) *I want to be recognized by this person on Twitter*.

Affiliative Tendency was measured using Mehrabian's (1970) scale. All items were measured on a 7-point Likert-type scale. This scale was reliable ($\alpha = .82$) and consisted of twenty-six items, including: *When I'm not feeling well, I would rather be with others than alone*; *I enjoy a good movie more than a big party*; *I think that*

any experience is more significant when shared with a friend; and *I have very few close friends*.

Extroversion and openness were measured using John and Srivastava's (1999) Big Five Personality Inventory and were measured on a 7-point Likert-type scale. Both extroversion ($\alpha = .84$) and openness ($\alpha = .70$) achieved acceptable reliability.

Finally, the dependent variable, likelihood to engage with celebrities through Twitter, was measured with a single item, wherein participants were asked, "How often do you try to interact with celebrities through Twitter?" This was measured on a scale of 1 (Never) to 5 (All the time). See Table 1 for study means and correlation matrix.

Table One

Means, Standard Deviations, and Correlations for all Variables—Study One

	M	*SD*	1	2	3	4	5	6	7	8	9
TweetingCeleb		1.83	.76								
Social cache	3.60	1.40	.43**								
Extroversion	4.54	1.06	.07	.07							
Openness	4.77	.85	.08	.06	-.01						
Interest (API)	5.46	.96	.20**	.46**	-.03	.05					
Identify (API)	3.50	1.29	.21**	.43**	-.02	.20**	.44**				
Problem (API)	4.36	1.42	.17**	.40**	-.12*		.06	.59**	.69**		
Affil.Tendncy	4.79	.61	.08	.01	.53**	-.14**	.17**	-.12*	-.03		
Breadth	4.41	1.39	.13**	.19**	-.04	-.00	.20**	.11	.16**	.03	
Depth	4.05	1.35	.09	-.05	.13	-.03	-.07	-.21**	-.28**	.02	.34**

** $p < .01$, * $p < .05$

Study One Results

Participants were asked to specify one celebrity and to indicate what they believed that person was famous for. Miley Cyrus was the most frequently selected celebrity (9.2% of participants), followed by Amanda Bynes (3.7%), LeBron James (2.6%), and Ellen DeGeneres (2.3%). Participants indicated that their celebrity was famous most often because he or she was a musician (39.3%) or actor/actress (38.1%), followed by athlete (18.9%), comedian (14%), other (10.3%), fashion (5.2%), and politics (1.1%). The most common answer for "other" was "reality TV star," with other responses including professional video game streamer, inventor, model, and religious leader.

To test hypotheses, a multiple regression analysis was conducted. The first model explored the influence of demographic characteristics on the dependent variable (see Table 2). The second model identified the significant predictors of tweeting at celebrities. The model was statistically significant, $F(3, 348) = 31.70$, $p < .001$, and showed that message depth and social cache accounted for 21%

of the variance for tweeting at celebrities, thus partially supporting H2 and offering full support for H3. The third model explored interaction effects. It revealed that an interaction between parasocial-identity and social cache as well as between parasocial-interest and social cache explained additional variance in frequency of Twitter users engaging with celebrities. This offered partial support for H1. No support was found for H4a-c.

Table 2

Backward Regression Results Showing Significant Predictors of Frequency of Celebrity Interaction on Twitter—Study One

Predictor	β Model 1	SE Model 1	β Model 2	SE Model 2	β Model 3	SE Model 3
Age	.10	.02				
Race	-.04	.02				
Gender	-.09	.09				
Cache			.43***	.03	-.35	.16
Extroversion						
Openness						
Identify					-.17	.09
Interest					-.06	.07
Problem						
Affil. Tend.						
Predictability						
Breadth						
Depth			.11*	.03	.11*	.03
CacheIdent.					.20*	.01
CacheInter.					.26**	.01
R^2	.02		.22		.23	
F change	2.21		8.64		4.66	

Model 1 = Demographics, Model 2 = IVs added, Model 3 = inclusion of interaction term

*** p < .001, ** $p < .01$, * $p < .05$

Study One Discussion

The results of Study One demonstrated that perceived message depth, social cache, and an interaction between social cache and parasocial-identity and parasocial-interest were significant predictors of tweeting at celebrities. These results confirm the prediction of SPT, which suggests that when participants perceived a greater depth in

the content of celebrity tweets, they would be more likely to tweet at that celebrity. Perceiving more depth in celebrity tweets could inspire followers to reciprocate the closeness implied in the message, as has been shown in others modes of communication online (Barak & Gluck-Ofri, 2007).

The stronger predictor of tweeting at celebrities, however, was the newly measured construct social cache. It was anticipated that the desire to be personally and publically acknowledged by a celebrity through a retweet would be positively associated with frequency of interaction with a celebrity. This prediction was confirmed, showing how Baym's (2007) discussion of fandoms can be extended to Twitter. Fans use Twitter as a way to show they are committed. A retweet or response from a celebrity serves as a form of validation to share with other fans.

The interaction between parasocial relationships through interest and identification as related to social cache explained additional variance in tweeting at celebrities. Although these parasocial relationships were not an explanatory predictor of celebrity tweeting behavior alone, when followers of a celebrity identified with or were interested in the celebrity and also felt that being acknowledged by the celebrity would be valuable, they were more likely to attempt to engage with that celebrity. Only in concert with social cache did either of these two parasocial behaviors predict tweeting.

Finally, personality did not explain additional variance in frequency of engaging with celebrities, despite past research that has suggested a potential relationship (Hughes et al., 2012; Lee & Jang, 2013; Quercia et al., 2011).

Although Study One provided three potential explanations for celebrity tweeting behavior, there were several limitations. First, the dependent variable did not reflect all of the possible ways in which individuals could attempt to interact with celebrities on Twitter, but instead was a general measure of frequency of attempts to interact online. Given the multiple approaches discussed previously (e.g., tweeting at, tweeting back, retweeting) it is important to develop this research further. Second, Study One was primarily exploratory in nature, and additional research could help to establish the potential causal relationship between concepts. Finally, the primary predictor, social cache, is a concept new to social networking site research, and should be explored further to confirm these results.

Study Two was thus conducted to provide additional experimental evidence of the predictive value of these variables, and to address the generic measurement of the dependent variable with a more specific measure based on the capabilities of Twitter.

Study Two

Method

Participants. Respondents (N = 208) were recruited from communication courses at a large public university to complete an online instrument. Participants were required to have a Twitter account in order to be a part of the experiment. Partial course credit worth less than .5% of their final grade was offered in exchange for participating in the experiment. Participants were slightly skewed towards female (54.3%). The mean age for participants was 19.00 (SD = 1.48, range 18-30, mdn = 19). Most participants identified as Caucasian, then Hispanic/Latino(a) (7%), Asian (6%), Black/African-American (5%), Native American (1.5%), and Multi Ethnic (1%).

Procedure. Participants were randomly assigned to one condition in a 2 (High Social Cache, Low Social Cache) by 2 (High Parasocial Relationship, Low Parasocial Relationship) by 2 (High Depth of Disclosure, Low Depth of Disclosure) experiment. Participants were provided the following instructions: *This is a study about Twitter use and celebrities. You will be asked to imagine a situation where you are following a celebrity on Twitter*. The social cache condition was manipulated by the degree to which participants believed being acknowledged by the celebrity would be valuable. The parasocial relationship condition was manipulated by the closeness and similarity the participant felt toward the celebrity (identification factor). Finally, the depth condition manipulated the degree of disclosure, either personal and private or surface information.

Measures. After reading the scenario, participants completed a four-item dependent measure and three manipulation check measures. Twitter engagement was measured using a 4-item, 7-point Likert-type scale evaluating the likelihood of engaging with a celebrity through a variety of means: (1) *I would tweet at this celebrity*, (2) *I would retweet this celebrity's tweets*, (3) *I would favorite this celebrity's tweets*, and (4) *I would use hashtags with the celebrity's handle.* The measure showed acceptable reliability (α = .75). The dimensionality of the new Twitter engagement measure was examined using EFA with principal axis factoring and promax rotation. The first factor, which included all four of the original items, had an eigenvalue of 2.32 and explained 58% of the variance. Finally, participants were asked to report how often they use Twitter and how often they try to interact with celebrities through Twitter.

Study Two Results

Three manipulation checks were tested using MANOVA. Results indicated that all independent variables were successfully manipulated: the cache condition significantly increased the likelihood that participants agreed with the statement, *If I were to tweet at this celebrity, it would be because I could show my friends I got retweeted*, $F(1, 198) = 36.85$, $p < .001$, $\eta 2_p = .16$; the parasocial relationship condition increased the likelihood participants agreed with the statement, *I can identify with this celebrity*, $F(1, 198) = 25.83$, $p < .001$, $\eta 2_p = .11$; and the depth condition increased the likelihood that the participant agreed with the statement, *The celebrity discloses just about everything on Twitter*, $F(1, 198) = 36.47$, $p < .001$. $\eta 2_p = .15$. For all three independent variables, only the corresponding manipulation check item was significantly affected by the manipulation.

A 2x2x2 ANCOVA was conducted to examine the effect of the three independent variables on Twitter engagement, controlling for participant age, race/ethnicity (White = 1), and sex. The model was significant, $R^2 = .16$. Results indicated that all three variables predicted Twitter engagement: social cache, $F(1, 197) = 6.05$, $p = .015$, $\eta 2_p = .03$; depth, $F(1, 197) = 7.81$, $p = .006$, $\eta 2_p = .04$; parasocial, $F(1, 197) = 7.14$, $p = .008$, $\eta 2_p = .04$. None of the covariates or interaction effects influenced Twitter engagement. While parasocial and social cache both increased the likelihood of engaging with celebrities, the depth of the disclosures decreased the likelihood of celebrity engagement. The planned parasocial by social cache interaction term only approached significance, $F(1,197) = 1.98$, $p = .09$.

A second 2x2x2 ANCOVA was conducted controlling for overall Twitter use and general likelihood of celebrity interaction as covariates. This test examined whether the experimental effects still occurred controlling for the participants' baseline tweeting tendencies. Results indicated that all three variables explained variance in Twitter engagement: social cache, $F(1, 198) = 5.18$, $p = .025$, $\eta 2_p = .03$; depth, $F(1, 198) = 5.02$, $p = .026$, $\eta 2_p = .03$; parasocial, $F(1, 197) = 8.24$, $p = .005$, $\eta 2_p = .04$. Overall Twitter use did not explain variance in engagement, but the results indicated that Twitter engagement tendency in general was a strong predictor of engagement in response to the experiment, $F(1, 197) = 28.89$, $p < .001$, $\eta 2_p = .13$.

Study Two Discussion

In support of H2 and H3, social cache and strength of parasocial relationship both explained unique variance in Twitter engagement with an imagined celebrity, but the planned interaction effect between depth and parasocial relationships only approached significance. Study Two demonstrated that when Twitter users generally engage with celebrities, they reported a higher likelihood to engage with an imagined new celebrity as well. Experimental results of Study Two do not support Study One's conclusion that message depth positively influenced likelihood to engage with celebrities (H1). Rather, it suggested that more intimate sharing on Twitter decreases the likelihood fans would contact celebrities.

General Discussion

The results of our multi-study investigation indicate that three distinct factors influence fans' engagement with celebrities through Twitter. Although the newly developed concept of social cache and the well-established concept of parasocial relationships both positively influence fan-celebrity engagement on Twitter, the results of message depth show a mixed and inconsistent relationship with engagement. Additionally, no individual differences (i.e., affiliative tendency, extroversion, openness) uniquely explained why some fans attempt to engage with celebrities through Twitter and others do not.

Social Cache and Parasocial Interactions

Marwick and boyd (2011) note that "receiving a message from a highly followed individual is a status symbol in itself" (p. 150). Getting to claim that a celebrity tweeted back or retweeted a post provides a sense of intimacy with that celebrity that can often not be obtained for most people and can be seen as a mark of achievement for some Twitter users. Showcasing to others that a celebrity noticed them on Twitter allows a user to gain popularity and potentially positive reputation (Recuero et al., 2012). This understanding is consistent with research on other social media (Ellison, Vitak, Gray, & Lampe, 2014) that finds gaining social capital to be a primary function of social media. We see social cache as a subset of capital gained online which users seek to obtain, a view supported by the results of both studies.

Further, findings from both studies indicate that when the fan-celebrity relationship is felt to be particularly close from the fan's perspective, attempts to engage with that celebrity through Twitter may increase. The interaction effect detected in Study One was approaching significance in Study Two, which suggests that the

combination of relational closeness and the hope of being acknowledged has unique value in understanding engagement.

Despite the illusion of closeness created by Twitter, a power differential still exists between celebrities and their followers. A celebrity may never respond to followers, but there will always be a high number of followers who attempt to engage with a celebrity online. Findings of Study Two bolster this explanation in that generalized celebrity engagement was a significant predictor of likelihood of engaging with the celebrity in response to the experimental manipulation. People who are actively engaging celebrities will attempt to tweet at celebrities, no matter whether the parasocial relationship is strong or weak, the communication deep or shallow, or there is more or less value to being acknowledged by them.

Social Penetration Theory

Study One suggested that the depth of communication from a specific followed celebrity positively influenced Twitter engagement, but Study Two found that depth of communication negatively influenced Twitter engagement with an imagined celebrity. This discrepancy draws a distinction between the specific celebrity identified in Study One and an imagined celebrity in Study Two. Twitter has the potential to develop and cultivate ongoing parasocial connections by enabling actual communication between a fan and celebrity (Baym, 2012; Marwick & boyd, 2011). However, SPT would suggest that more intimate self-disclosures at early stages of relationship development are off-putting and inappropriate—they are risky at the orientation stage of relationships (Altman & Taylor, 1973). Deep mediated communication with an unknown celebrity may discourage attempts to engage, but deeper communication may encourage parasocial interactions and relationship development at more intimate stages of parasocial relationships (Brown et al., 2003). Study One provided the users with the option to self-select a celebrity they follow, while the design of Study Two created an imagined other, which may not function in the same way as fandom.

Limitations and Future Research

Both limitations and findings of this exploration can inform future research. One limitation to this exploration is the sample, which skews towards college-aged females for both Study One and Study Two. However, past research suggests that women are more likely to engage in parasocial relationships than men (Laken, 2009; Schiappa, Allen, & Gregg, 2007) and that college students are likely to have had a celebrity idol (Boon & Lomore, 2001). An added level of

interpretation here given the young(er) age of the sample is they are all digital natives. Having grown up with technology, this particularly group of individuals is well suited to consider the potential benefit of using social media to connect with celebrities as opposed to past means of interaction. As a result, our sample is ideal for assessing this particular phenomenon. Future research would benefit from broadening the groups represented in the sample.

A second limitation of the present investigation is that self-reported engagement rather than actual Twitter behavior was examined. Future studies might explore whether pre-existing social cache or parasocial relationships can predict future Twitter behavior with several celebrities.

Finally, the design of Study Two may be viewed as a potential limitation given the note above about the imagined versus real celebrity and the manipulation of expectation of feelings towards them. A product of the study design, we believe that in conjunction with Study One, it provides a solid understanding of old and new measures alike, further bolstering the validation in particular of social cache.

Beyond limitations, the findings provided by these studies can provide the impetus for future research. Offering a more developed measure of Twitter engagement showed that users find many creative ways to engage with a celebrity, including retweeting a celebrity's tweet, tweeting at/back, favoriting tweets, and using hashtags. Further analysis of the different approaches to engagement (e.g., tweeting back versus retweeting a celebrity's tweet) can help to understand motivation for using Twitter as a way to connect to a celebrity. While some behaviors are explained well by social cache (e.g., tweeting at/back, hashtags), other behaviors do not necessarily lead to recognition (e.g., favoriting or retweeting their post), which suggests there are additional motivations to explore concerning fan-celebrity relationships on Twitter. Recuero et al. (2012) highlight hashtags as an important part of the fan experience, since it can lead to that hashtag being a "trending topic" on Twitter that is more likely to be noticed. The inclusion of favoriting and retweeting does demonstrate that some followers see it as enough to support the celebrity through Twitter without actively seeking a response. Tweeting at/back and hashtags are the most likely to be related to social cache, since they both demonstrate active ways a user seeks attention and response from a celebrity (a retweet and/or favorite are less likely to lead to a response). Future research may also consider what role social cache plays within the context of additional online behaviors. Outside of self-disclosure, what else might be predicted by attempting to interact with celebrities online?

Future research may also consider the potential backlash which can occur from engaging with celebrities online and angering

fandoms. Flaming is a regular occurrence through technology, and celebrities are not immune to name-calling and other hateful comments online. What draws someone who may seem themselves more as an anti-fan to interact with a celebrity online, and what potential benefits and/or drawbacks do they see from this interaction?

Our results show that when individuals feel a connection with celebrities and value public, mediated acknowledgement of that connection, they seek out further engagement through tweeting, favoriting, and hashtags. Future research should continue to expand upon the relationship between social cache, parasocial relationships, and Twitter interactions, as well as the double-edged sword of intimate disclosures on Twitter. Future research might also consider the inherent relationship between celebrity-fan and the implications of these results for the celebrity. Some celebrities opt to clearly use their own accounts through language or having a sign off, while other celebrities create uncertainty of whether it is actually them posting or their management team. This decision can have implications in terms of what the celebrity gains from using social media.

Conclusion

In all, this research is an important step forward in seeing the unique value in social networking sites such as Twitter. While Facebook and Instagram currently outpace Twitter in overall popularity with adult Internet users (Duggan et al., 2015), it is on Twitter that a user can gain insight into the lives and gain a sense of connection with their idols—and maybe, just maybe, get a response.

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