

THE EFFECT OF SELF-DISCLOSURE IN CELEBRITY TWEETS ON MESSAGE
PROCESSING, PARASOCIAL RELATIONSHIPS, ATTITUDES, AND
BEHAVIORAL INTENTIONS

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OLIVIA KING
Dr. Paul Bolls, Thesis Supervisor

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The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

THE EFFECT OF SELF-DISCLOSURE IN CELEBRITY TWEETS ON MESSAGE
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presented by Olivia King,

a candidate for the degree of master of arts,

and hereby certify that, in their opinion, it is worthy of acceptance.

Professor Paul Bolls

Professor Margaret Duffy

Professor Cynthia Frisby

Professor Brian Houston

DEDICATION

This thesis is dedicated to all my friends and family who offered words of encouragement throughout this entire process, and tolerated me when my stress-induced antics were intolerable.

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Olivia King

Dr. Paul Bolls, Thesis Supervisor

ABSTRACT

This study examined the role of self-disclosure in celebrity tweets. Thirty-six fictional tweets created by the researcher were used as stimuli in a single-factor (disclosure: low v. moderate v. high) fractionated experiment. The 55 participants were told the purpose of the experiment was to better understand the use of Twitter by up and coming celebrities in the entertainment genre. After taking an entertainment preference questionnaire and reading each celebrity's biography, participants were instructed to view each tweet presented in a random order while psychophysiological measures were recorded to index real-time emotional processes engaged while viewing the tweets. After initial exposure to the tweets, participants were briefly shown each tweet again and answered various self-report items. Results show that the reading of one individual tweet is not motivationally relevant enough to influence arousal or valence. However, self-report results indicate that moderate and high disclosure tweets, which are tweets conveying a celebrity's likes and dislikes or personal information, lead to higher parasocial interaction, which effects attitude and behavioral intentions. Practical implications, construction of celebrity tweets, and limitations of the study are discussed.

Chapter 1: Introduction

In society today, social media has become extremely prevalent. A recent study found that people are now spending more time on social media than any other Internet activity, even surpassing email (Adler, 2004). Specifically, U.S adults spend an average of 42.1 minutes a day on Facebook, 34.2 minutes on Tumblr, 21.2 minutes on Instagram, 20.8 minutes on Pinterest and an average of 17.1 minutes on Twitter (Bennett, 2014). However, people are no longer using these sites just to stay in touch with personal acquaintances but also to instantly connect with their favorite celebrity or media figure. Due to this increased consumer participation, social media platforms are now playing a central role in celebrity advertising and promotional campaigns. SNS's are used to increase interest in a celebrity brand by actively engaging with the consumer but also by encouraging consumers to engage among themselves (Concepcion & Peters, 2010).

Due to the fascination people have with popular culture, media frequently focus their content around the personal lives and careers of celebrities. Social media expands upon that coverage by giving consumers a direct access to the everyday thoughts and daily activities of a celebrity (Palmieri, 2013). This type of access is unprecedented and therefore can lead to the formation of a parasocial relationship. Horton and Wohl first introduced the idea of parasocial relationships in 1956. They define the concept as “an illusion of face-to-face relationships with the performer” that develops as a result of mass media usage (Horton & Wohl, 1956, p. 215). This relationship is one-way, and controlled by the media figure. However, when a performer or celebrity seems to direct a message specifically towards a viewer as if the conversation were private, the viewer responds as

if the message was personally intended for them (Horton & Wohl, 1956). According to Horton and Wohl (1956), when viewers begin to learn about the personal lives of their favorite performers, their parasocial relationships become stronger. Celebrities can continue to enhance these relationships by sharing detailed information and making their messages casual and personal. Since Horton and Wohl's research was conducted before the advent of the Internet, their study focused primarily on television and radio media figures. However, the present study will apply their findings to modern day, where the idea of parasocial relationships continues but in a different context.

Celebrity brands are now trying to foster relationships with consumers through the use of parasocial relationships on SNS's in hopes that the perceived personal connection between the consumer and the celebrity that social media now provides will lead to interest in the brand and ultimately purchase intent. Unlike television and radio, parasocial relationships on SNS's are often formed based on the static contents of a message instead of the sound of a celebrity's voice or constant images of the celebrity fleeting across the TV screen. Thus, it is important to understand the psychological underpinnings of consumer relationships that form based on SNS interactions. The present study will do so by focusing on how the content of the celebrity's SNS message influences the formation of parasocial relationships by analyzing how consumers process the messages they receive.

The present study uses the theoretical framework of the Limited Capacity Model of Motivated Mediated Message Processing to analyze how a consumer processes a celebrity's message on Twitter and what message cues, such as openness in communication, activates their human motivational systems thereby influencing

the formation of a parasocial relationship, which can lead to changes in brand attitude and other behavioral intentions. “Openness in communication” was chosen as the message cue based on the knowledge from parasocial interaction (PSI) literature that people often seek parasocial relationships in order to increase their knowledge regarding a person. Thus in the present study, “openness in communication” is synonymous with the independent variable of celebrity disclosure. Twitter was chosen as the social media platform based on its popularity, strong celebrity presence and its perceived intimate level of interactivity. Also, most tweets consist of messages in the form of words, which allowed for easy experimental manipulation.

Research Question

This study investigated the following general research question. How does self-disclosure in a celebrity’s Twitter message impact motivated processing of the message and outcomes related to the formation of parasocial relationships?

In order to answer the proposed question, an experiment was conducted in the Media Brain Lab at the Missouri School of Journalism. The experiment employed a single factor, fractionated design with one independent variable containing three levels (celebrity disclosure: low, moderate, high). Participants were randomly assigned to an experimental condition and asked to view a variety of celebrity tweets differing in their level of celebrity disclosure. Celebrity disclosure is conceptualized as a message that contains “openness in communication” which is defined as “the act of revealing information to a viewer that builds intimacy and trust” (Labrecque, 2014, p. 137). For the sake of the present study, “celebrity disclosure” refers to message content that contains any personal details related to the celebrities’ life, such as hobbies, interests, or personal

revelations. In order to create message content at the different levels of disclosure, the research utilized Jourard and Lasakow's (1958) self-disclosure questionnaire as well as Altman and Taylor's stages of relationship building according to Social Penetration Theory. While viewing the tweets, psychophysiological measures were used to analyze whether there were any significant differences in emotional valence and arousal levels when reading different versions of a celebrity tweet: a tweet with low celebrity disclosure versus a tweet with moderate celebrity disclosure versus a tweet with high celebrity disclosure. Thus, valence and arousal were the primary dependent variables. Memory measures were also used to analyze whether the level of disclosure in the tweets affected participants ability to recognize the celebrity when asked. Thus, celebrity recognition is also a dependent variable.

PSI served as another dependent variable based on the knowledge from previous research that messages with high levels of disclosure can encourage PSI and changes in the viewer's attitudes and behaviors are often contingent on the formation of a parasocial relationship (Labrecque, 2014). The experience of PSI often mimics interpersonal relationships and individuals claim they "feel that they know and understand the person in the same way they know and understand flesh and blood friends" (Perse & Rubin, 1989, p. 60). When a mediated person uses open communication the same way they would in an interpersonal relationship, the credibility and persuasiveness of the message increases (Beniger, 1987) and a connection between the individual and the mediated person begins to develop. By increasing perception of credibility, PSI can also alter consumer attitudes and behavior (Rubin & Step, 2000). Since attitudes are one of the best predictors of a person's behavior and can lead to predictions regarding purchase

intentions (Jee & Lee, 2002), consumer attitude toward the celebrity is the fifth dependent variable.

Previous research has found that the outcomes of a parasocial relationship should also mimic the outcomes one would see in a real interpersonal relationship. In a real relationship, a person tries to make their friend happy through acts of kindness such as buying them a gift or showing up to support them in their endeavors. Those involved in a parasocial relationship strive to please the mediated person through similar acts such as purchasing products that the mediated person is associated with or viewing more episodes of a television show (Park & Lennon, 2004; Skumanich & Kintsfather, 1998). Thus, the final dependent variable is behavioral intentions. The present study used a self-report questionnaire to measure behavioral intentions as well as celebrity attitudes and the formation of parasocial relationships.

The researcher hopes to fill two gaps through this study. The first gap is that there is currently no available public research that looks at how tweets are processed and responded to. There is also a lack of empirical research testing the LC4MP model in a social media environment. The study attempted to find out whether LC4MP framework is applicable to social media platforms by exploring the motivations behind the processing of celebrity messages on Twitter. The second gap is that few studies focus on exploring the content of a social media message and the role it plays in the formation of parasocial relationships and other consumer behaviors. This study attempted to find out whether using openness in communication through the form of self-disclosure in a celebrity tweet leads to emerging parasocial relationships and if the positive emotional processing of those tweets would have an impact on consumer's attitudes and purchase intentions. In

addition, this study may help marketers figure out the most effective way to craft their messages when promoting products and events on social media platforms.

Chapter 2: Literature Review

Overview

The purpose of the present study is to test how the processing of a celebrity's Twitter message, which contains "openness in communication", leads to emerging parasocial relationships and other consumer behaviors. The study will do so through the use of the LC4MP framework to analyze how a consumer processes a message with celebrity disclosure on Twitter and determine if the positive emotional processing of that message would have an impact on consumer's attitudes, behavioral intentions, and feelings of parasocial interaction. Based on the purpose of the study, the literature review consists of 3 parts: background, parasocial interaction, and LC4MP. The background section provides a review of literature on celebrities' social media use. The section on parasocial interaction provides a review of literature on parasocial interaction, its extension into the online environment, the use of openness in communication in fostering PSI, and the relationship between parasocial relationships and consumer behaviors. The section on LC4MP reviews literature regarding the LC4MP framework and its application to the present study.

Background

Due to its rising popularity, social media is becoming an integral aspect of celebrity advertising and promotions. According to an article from *Advertising Age*, more marketers are starting to write social media guarantees into their contracts with celebrities. Examples of such stipulations include a brand requiring that a celebrity tweet X times a day about the product or post X times a day on Facebook (Hampp, 2011).

Advertisers are hoping that a tweet from a celebrity may make the product or brand more appealing for the consumer. However, celebrities also use social media for their own personal interests. For example, celebrities use it for social communication, just as non-celebrities do. Celebrities may tweet back and forth at each other and their fans just happen to be an incidental audience (Stever & Lawson, 2003). Other celebrities use social media as an outlet to provide the public with information about products, events, and causes. Thus, it is also a marketing tool.

In the months prior to the November 2010 release date of Kanye West's album *My Beautiful Dark Twisted Fantasy*, West visited the headquarters of Twitter and Facebook to perform new material which ended up on YouTube, used a webcasting service to live chat with his fans to tell them the release date of his album, and lastly took to Twitter to announce to his plans to release a new song every week from August up until Christmas (Concepcion & Peters, 2010). West is just one example of a celebrity using social media for marketing and promotions. MC Hammer (2009) used Twitter primarily to increase awareness of his television show and indicated its importance stating:

The use of social media outlets effectively shortens the distance between the content that is created and the consumer like no other medium. The same is true with celebrities, artists, and other entertainers like me who are now closer to fans than we've ever really been before. (p.8)

Other examples include entertainment conglomerates like Warner Brothers using social media to promote exclusive pre-orders of upcoming albums in order to create chatter among the fans who preordered and those who waited for the official release

(Concepcion & Peters, 2010). It is obvious that social media plays a vital promotional role in the entertainment industry. However, promotional content has its limits and cannot be the sole purpose of social media strategy. David Marcus, senior VP of strategic initiatives at Warner Bros Records, continually emphasized the importance of communication with fans stating that simply interjecting commercial messages into the social media stream is not going to get an artist very far (Concepcion & Peters, 2010). Celebrities must be actively engaged in social media in order to reap the full benefits it has to offer.

Another way celebrities use social media is to communicate with their fans without a marketing intent. Celebrities already have a fan base so marketing to that fan base may seem redundant. Josh Groban stated in an interview with BBC5's Richard Bacon that his fans often know what he does before he even does it, meaning they are constantly attuned to every aspect of his life (Stever & Lawson, 2013). Though celebrities' Twitter messages are occasionally about items that may seem trivial such as what they ate for dinner or deciding what shirt to wear, there is an underlying marketing intent. In general, a celebrity's image serves as a brand and as such, celebrities are constantly promoting and marketing themselves as a product (Schroeder, 2005). Thus, everything the celebrity does or says, especially on social media, contributes to his or her brand. In order to constantly build the brand, it is important for the consumer to have an interest in it. One way of increasing that interest is through relationship marketing. Casalo, Flavian, and Guinaliu (2008) found that trust, satisfaction, and communication are factors contributing to consumer involvement with a brand. When these factors are present, consumers will return to the brand, maintain their relationship with the brand,

and also promote the brand to others (Casalo, Flavian, & Guinaliu, 2008). Based on those premises, celebrities largely use their Twitter accounts to establish communication with consumers by sending tweets that convey messages about their personal likes and dislikes. “Twitter gives one the sense of “being there” with the celebrity and as such, is possibly the most intimate form of communication used to date by celebrities to connect with their fans” (Stever & Lawson, 2013, p. 351). By connecting with their fans in such an intimate way, celebrities are establishing a parasocial relationship with them. The following section will discuss parasocial relationships, how they are formed, and their expected outcomes.

Parasocial Interaction

Parasocial interaction theory is widely used in the field of mass communication. Horton and Wohl (1956) first introduced the concept by exploring the different interactions between mass media users and media figures. Through their research they determined a certain relationship existed where the user acts as though they are involved in a typical social relationship with the media, even though the media cannot reciprocate or communicate back to the user. Though the relationship is one-way, the media user still develops a sense of intimacy with the media figure. Through parasocial relationships, the media figure can create a sense of intimacy with large audiences. However, the media figure must take certain actions to enhance the relationship such as making frequent and planned appearances and allowing the audience to have a look into the figure’s personal life (Horton & Wohl, 1956). For the current study, Horton and Wohl’s suggestions for media figures will apply to celebrities, since the two can often be synonymous. Thus, SNS’s serve as the perfect place for celebrities to reach large audiences and also reveal

intimate details through a tweet or Instagram post. However, posting frequently is important to continually strengthen the bond of the relationship.

In order to enhance the intimacy of the relationships, Horton and Wohl suggest celebrities keep their messages casual and conversational. By doing so, celebrities are breaking away from the professional role and trying to relate to their audience on a personal level. PSI research utilizing uses and gratification theory found that people form relationships with media figures for a variety of reasons. Mcquail, Blumer, and Brown (1972) analyzed viewer responses to soap opera dramas and found that viewers frequently identified with soap opera characters and used their characteristics and behaviors to understand the lives of their friends as well as their own personal lives. Thus, Mcquail et al. (1972) suggested two of the essential functions of PSI were companionship and personal identity. Rosengren and Windahl (1972) argued against the function of personal identity by claiming that PSI could still occur if a user interacted with the media figure but did not identify with them on a personal level. However, Rosengren and Windahl did agree with McQuail et al. about PSI's essential function of companionship which they believe stems from certain characteristics of the user's social life. Further PSI research resulted in the eventual creation of Rubin, Perse, and Powell's (1985) 29-item PSI scale. Later studies have used a modified version of the original scale and their results found that PSI was associated with viewing motives and may be the best predictor for what motivates someone to watch television (Giles, 2002). Further studies also found that perceived realism and attraction to the media figure were highly correlated to PSI (Rubin et al., 1985; Rubin & Perse, 1987; Rubin & McHugh, 1987). Thus, media users evaluate media figures along the same lines they would evaluate

friends and family in the flesh. This leads to the assumption that media users may be motivated to form parasocial relationships based on the same motivations for interpersonal relationships. A brief look at psychology further explains this notion.

PSI and psychology. Though PSI is widely used in mass communication, one of its key concepts stems from a psychological issue questioning the similarities between parasocial relations and ordinary social relations (Giles, 2002). The assumption exists that once a person has judged a media figure and given it certain characteristics, they will integrate the figure into their social network as if it was actually occupying their physical space (Giles, 2002). A number of studies have explored that assumption by testing if the psychological processes that drive people towards face-to-face relationships are also present in the course of parasocial relationships. Rubin and McHugh (1987) found that social attraction was more important than physical attraction when studying what factors motivated a sample of undergraduate students to develop a parasocial relationship with their favorite TV character. Turner (1993) approached PSI from the viewpoint of homophilia and found that the strength of the parasocial relationship increased when the user found themselves similar to the figure in terms of background, appearance, and attitude. Similar research exists concerning celebrity endorsements and consumer relationships. The findings from Ilicic and Webster's (2011) study show that a consumer's relationship with a celebrity endorser determines their attitudes toward an advertisement, a brand, and purchase intention. Aaker, Batra, and Myers (1992) further elaborate on this concept by stating that "a source that is presented as being similar to the audience in terms of attitudes, opinions, activities, background, social status or lifestyle could achieve both liking and identification" (p. 17). This suggests that the

persuasiveness of the source's message is greater when the receiver has more in common with the source. However, consumers may still engage in PSI with a media figure they do not identify with, allowing them to still interact with media figures they actively dislike (Giles, 2002). The results of Turner's (1993) study also found the effect of the similarities varied according to the type of media figure. This finding aligns with Cohen's (1999) belief that different types of user-figure interaction vary based on the media figure. Cohen (1999) argued that PSI is most appropriate when describing a media figure that directly addresses his audience such as a television host or media presenter. In the present research, the celebrity does not directly address the user through traditional outlets such as television but through the content of their social media posts. Regardless of who the media figure is, Giles (2002) identifies three different characteristics of the figure that may determine the nature of the parasocial relationships: authenticity, representation across different media outlets, and user contexts such as co-viewing. Since the present research is only examining individual user responses to a media figure on a single platform, it is not necessary to discuss the characteristics of user contexts and different media outlet representations. However, a further understanding of the first characteristic is important.

According to Giles (2002), the key element in user-figure relationships is authenticity. When forming a relationship, it is important for the user to be able to make judgments about the media figure. When the user perceives the media figure to be "real", the chance of PSI increases (Alperstein 1991; Rubin, Perse, & Powell, 1985; Rubin & Perse, 1987). The nature of the media figure also contributes to their authenticity. For media figures like newscasters and presenters, it is important to be authentic because it is

part of their appeal. However, authenticity is also important for popular celebrities since “faking it” by inappropriately endorsing a product can hurt their reputation (Alperstein, 1991). Studies on celebrity endorsements found that consumers only considered a celebrity an expert in product categories that accurately reflected the media images and lifestyles the consumer perceived the endorser to lead. For example, consumers considered Sean Connery a suitable endorser for Aston Martin cars and Scottish tourism products because he appeared in James Bond films and has a Scottish heritage so his endorsement of the brand positively correlated to his media image and cultural background (O’Mahony & Meenaghan, 1998). On the contrary, consumers believed he was an unsuitable endorser for products such as baby diapers or agricultural type products. Consumers did not find him to be a credible endorser because they believed he lacked expertise in these particular product categories. Their reasons ranged from “these products do not suit his image” to “I don’t think he would use that” (O’Mahony & Meenaghan, 1998, p. 23). This leads to the assumption that consumers might find him a more suitable endorser for those products if they knew more about his personal life. However, there are still instances where a user forms parasocial relationships with a fictitious character such as Minnie Mouse or a “pop star” that is clearly not authentic. Giles (2002) suggests future research explore what psychological explanations underlie these types of attachments. Thus, the present research hopes to do so by studying the psychological factors that motivate a user to form a relationship with a celebrity based upon the message cues in their tweets. Since the present research is investigating PSI on social media platforms, it is necessary to now review the literature regarding PSI in an online environment.

PSI in an online environment. Ballantine and Martin (2005) first looked at the formation of PSI in an online environment and studied how parasocial relationships “affect the consumption behaviors of online community users” (p. 197). They view online communities as an opportunity for brands to connect with and build relationships with their consumers. In a traditional media setting, PSI is limited by the fact that two-way communication is impossible and the Internet improves upon this limitation by allowing users to directly engage with media figures. However most celebrities, especially those with millions of followers, are not able to engage in two-way communication with everyone who contacts them. Thus, PSI on an SNS is also viewed in the context of one-way communication. Previous research on SNS’s classified the way users communicate with each other into two different types of relationships: interpersonal and parasocial (Baek, Bae, & Jang, 2013). In an interpersonal SNS relationship, one user follows another user and the other user reciprocates this process. Kwak, Lee, Park, and Moon’s study (2010) on SNS relationships found that some Twitter users follow each other, engaging in this interpersonal relationship. However, others only follow users who they have no mutual interaction with, resulting in a parasocial SNS relationship, which is the focus of the present study. For example, a user may follow a celebrity but the celebrity is not aware of the user’s actions. Unlike radio and TV where the celebrity’s face, body language, and voice can be seen or heard, messages in SNS relationships are often created based on the context of their typed words. This study is just focused on the formation of the parasocial relationship over a particular message cue on Twitter. The fact that celebrities have multiple social media accounts that ultimately contribute to a user’s overall perception of a celebrity and may serve as an outside influence over the

formation of a parasocial relationship was taken into consideration and became the driving force behind the creation of this study. In order to eliminate confounds regarding a participant's preconceived notions of a celebrity, the present study created fictional celebrities to be used as stimuli.

Fostering parasocial interactions. Many of the studies regarding parasocial relationships found that certain message cues can enhance the feeling of parasocial interaction. One of the message cues of particular relevance to the current study is discussed below.

Openness in communication. According to communication and relationship marketing literature, "openness in communication" is an important factor in building a relationship, thus it will serve as the basis of the independent variable for this study, which is celebrity disclosure. Openness in communication is defined as "the act of revealing information to a viewer that builds intimacy and trust" (Labrecque, 2014, p. 137). Since PSI relationships often mimic real relationships, the user wants to feel like they "know" the media figure. Viewers engaged in PSI often express their desire to learn personal details about the media figure (Stern, Russell, & Russell, 2007). Thus by revealing personal or intimate details, the celebrity is giving the consumer what they want. Also, by disclosing personal information, the media figure establishes trust with the media user and reduces uncertainty (Perse & Rubin, 1989). A recent study analyzing the role of parasocial interaction in fostering the consumer-brand relationship in a social media environment found that brands can create a sense of PSI by strategically crafting their messages with content that makes the brand appear that it is listening to its consumers and engaging in open communication (Labrecque, 2014). Labrecque's study

(2014) invited participants to browse a fictitious website of a retail clothing designer. The researcher's manipulations of openness consisted of two different blog posts that visually looked the same but differed in message content. Both posts described the designer's new collection being inspired by the Mediterranean Sea. However, the post in the high-openness condition linked the use of the sea to the designer's childhood memories while the low-openness condition lacked this personal touch (Labrecque, 2014). As expected, participants who viewed the posts with low openness reported significantly less feelings of PSI versus those in the high-openness condition. The results also found that the feeling of interaction was more important than the interaction itself in driving outcomes (Labrecque, 2014). Thus, celebrities should make their Twitter followers feel valued even though they do not know them on a personal level. The study also found that including personal details and a "back stage" access further increased open communication and feelings of interactivity. This leads to the assumption that a promotional message that contains personal details may have a positive impact on PSI. In order to understand what type of information can be considered "personal", it is necessary to review the literature regarding self-disclosure in the relationship building process.

Social penetration theory. In order to explain the development of interpersonal relationships, many scholars rely on social penetration theory (SPT). SPT claims that as an interpersonal relationship develops, communication moves from relatively shallow, non-intimate levels to deeper, more intimate ones (Dwyer, 2000). There are four stages of relationship building according to SPT. The first stage is the orientation stage, which consists of small talk and non-controversial clichés such as "practice makes perfect" (Dwyer, 2000, p. 84). In the present study, the orientation stage consists of the celebrity

simply informing his or her Twitter followers about their upcoming event. The orientation stage is followed by the exploratory affective stage. In the second stage, personal attitudes are shared such as “I’m not keen on Christmas, I think it’s too commercialized but its okay for kids though” (Dwyer, 2000, p. 84). Though personal likes and dislikes are discussed, this stage still avoids intimate talks. During the early stages of a relationship, limited personal information is provided and the information could sometimes be false or misleading because the communicator is more worried about making a favorable impression (Dwyer, 2000). Once a relationship reaches the third stage, the affective stage, personal and private matters are discussed and often accompanied by physical affection. Eventually, relationships can reach the stable stage where personal and private matters are openly shared and members of the relationship are able to predict the other’s feelings and behaviors (Dwyer, 2000). Since the current study consists of an online parasocial relationship, the physical affection aspect of stage three will not be considered. In addition, stage four of SPT is also not considered since the formation of a stable relationship may not be feasible when mutual interaction does not occur. However, what will be considered is the information that is exchanged during the first three stages of SPT.

A previous study using SPT explored topics that bloggers discuss on their blog versus topic they discuss in the real world. Tang and Wang’s (2012) study revealed that bloggers disclosed nine topics (attitude, body, money, work, feelings, personal, interests, experiences, and unclassified). However, the study found that bloggers disclosed different information with different targets. When asked what they would talk about on their blogs, most bloggers said they were likely to share their shopping experiences,

personal likes and dislikes, and travel advice. However, they were reluctant to share issues about work, money, or personal matters. Tang and Wang's (2012) study defined "personal" as "opinions about sex, attraction, self-esteem" (p. 247). Bloggers were more likely to share those personal matters with their best friend. This category was adapted by combining questions from the "personality" and "body" section of Jourard and Lasakow's original questionnaire. The findings from Tang and Wang's study, combined with SPT and the contents of Jourard and Lasakow's (1958) self-disclosure questionnaire, were used to manipulate celebrity disclosure, the present study's independent variable, consisting of three levels (low, moderate, high). The low level is equivalent to the orientation stage of SPT. However, instead of engaging in small talk, the celebrity tweeted a promotional message such as a tweet from Mariah Carey stating "Let's take MC straight to the top! Cast your vote for OBSESSED on VH1's Top 20 Video countdown @ <http://tinyurl.com/32ssp2>" (Carey, 2009). The moderate level of the IV is equivalent to the exploratory affective SPT stage. This is information that is shared among acquaintances or in the case of Tang and Wang's study, online audiences. The tweets in the moderate condition were adaptations of the interests and experiences section of Jourard and Lasakow's (1958) self-disclosure questionnaire such as the celebrities' favorite TV programs, personal interests, or recent traveling experience. An example of a moderate disclosure tweet is Josh Groban tweeting "Enjoying a beautiful Monday writing with my good friend Marius De Vries and also looking up flight schools online. NEW HOBBY!" (Stever & Lawson, 2013). The third level of the IV is high disclosure. This level is equivalent to the SPT affective stage and the information that bloggers would only tell their best friends in Tang and Wang's study. The tweets in the high disclosure

condition were adapted from the personality, body, and money sections of Jourard and Lasakow's (1958) self-disclosure questionnaire and consisted of intimate information about celebrities sex life, thoughts about self-esteem, physical attractions and personal shortcomings such as a recent message from Justin Bieber saying "I felt awkward up there. I felt like people were judging me. And I really want people to know how much I care, how much I care about people and how I'm not that person who says, 'I don't give a f---!' I'm not that kid." (Maresca & Molinet, 2015). Bieber's message was an excerpt of a Facebook video he posted to explain his behavior during an interview with Ellen DeGeneres, which was his first talk show appearance after a tumultuous two-year hiatus from his music career. Though Bieber's personal revelations were in the form of a video message, the same type of high self-disclosure can be emulated in a tweet.

Though the present study is not interested in analyzing how a relationship develops over time, it is concerned with the information content that a person reveals during each stage of a relationship. Thus, a person would not share certain things with a stranger that they would share with a best friend (Tang & Wang, 2012). The "celebrities" in this study will all be considered strangers to the participants since they are fictitious. However, the information each celebrity shares may be something they would only share with a best friend, or something they would share with an acquaintance. This study seeks to figure out how much self-disclosure is positively received on Twitter and if all celebrities should assume their relationships with their Twitter followers automatically skip to the third stage of SPT.

Outcomes of PSI. Aside from its ability to foster PSI, openness in communication is also frequently used in relationship marketing literature regarding the

positive outcomes of interpersonal relationships. By being open and communicating personal details, a sense of trust in a relationship is established. The same outcome occurs in parasocial relationships. When a media figure “breaks the fourth wall”, the user feels a sense of intimacy, and this intimacy and perception of a one-on-one relationship can lead the user to trust the media figure, granting them a credibility status (Auter, 1992). Once credibility is established, the user’s attitudes and behaviors may alter. A study examining the outcomes of the process of listening to talk radio found that radio listeners who parasocially interacted with the talk show host treated the host as a credible and important source of information and felt the host influenced their attitudes and actions regarding issues in society (Rubin & Step, 2000). This aligns with Kelman’s (1961) theoretical model of social influence and behavior, which hypothesized if a recipient of a message perceives the communicator to be credible, the likelihood of the recipient accepting the message because it aligns with his value system increases. The results of Rubin and Step’s (2000) study also found as the level of PSI increased, the listeners believed their attitudes were more in line with the attitudes of their favorite talk show host. Other research on PSI outcomes found that PSI can increase engagement (Grant, Guthrie, & Ball-Rokeach, 1991; Rubin et al., 1985), and whether the consumer feels “bonded” to the celebrity predicts the amount of time spent engaging in SNS (Phelps, 2011). For example, when a consumer perceives a celebrity to have a strong relationship with their brand/online community, a consumer is more likely to spend more time on SNS following the celebrity and engaging in the celebrity’s content (Phelps, 2011). If a consumer spends their time frequently checking the SNS account of a celebrity with whom they feel “bonded” to, it is assumed a favorable attitude towards the celebrity is

developed. Those who are engaged with PSI also strive to please the mediated person through gestures such as watching more episodes of the show or purchasing products that the mediated person endorses (Levy, 1979; Park & Lennon, 2004; Rubin & Step, 2000). In the context of the present study, those who are engaged in PSI with a celebrity on Twitter may strive to please them by retweeting their tweets, downloading their newest song, or purchasing tickets for their upcoming show.

As social media use continues to increase and marketers turn their attention to investing in such channels, it is necessary to understand the psychological underpinnings of consumer relationships. Specifically, it is important to understand how to craft a message to appeal to a consumer in the midst of all the advertising clutter. Traditional research methods offer insight into consumer behavior but often fail to accurately depict how the person feels. Thus, it is necessary to utilize psychophysiological measures, in combination with self-report measures, to garner a greater understanding of the human mind. The present research will do so by using facial electromyography and skin conductance measures and analyzing the results through Annie Lang's Limited Capacity Model of Mediated Messaging.

Limited Capacity Model of Mediated Message Processing

This research utilized Annie Lang's Limited Capacity Model of Motivated Mediated Message Processing (LC4MP) as its theoretical framework. LC4MP is a model used to investigate the real-time processing of mediated messages (Lang, 2009). The main strength of this model is its applicability to any situation, user, message, or media. In areas where prior empirical research has already been conducted, such as the processing of radio and television messages, the LC4MP can provide a theoretical

explanation for how a person focuses on a message, encodes, processes and then stores it (Lang, 2009). For areas such as the web, the LC4MP is still in the exploratory stages. Thus, the present research attempts to further that exploration into social media. In general, the main goal of this model is to understand the underlying mechanisms that are at work when a message is processed so marketers can have a better grasp on what people take away from a message (Lang, 2009). In order to do that, it is important to understand the roles that the motivational systems and information processing system play in the LC4MP.

According to Lang (2009), information processing is the simultaneous, continuous, overtime operation of at least three basic sub processes- encoding, storage, and retrieval. Encoding occurs when a person selects information from the environment and creates a mental representation of the information. Storage occurs when a receiver creates a long-term representation of the information that was just encoded. The LC4MP states that as new information is encoded, it is associated with previously held information and links between the two are formed (Lang, 2009). Retrieval occurs when the stored information is activated. People are constantly retrieving stored information in responses to questions, but also in order to understand, and contextualize incoming information. In order for information to be thoroughly processed, it has to be encoded, stored, and then received but the process is not linear. As people interact with an incoming message, all of the sub processes are occurring at the same time. However, the thoroughness of these sub processes depends on the level of resources that are allocated (Lang, 2009). This model states that resources are allocated through automatic and controlled processing mechanisms. The user controls controlled resource allocations

while automatic resource allocations are not. The resources that are automatically allocated occur as a result from a certain stimulus or because the user's unconscious supports what is happening in the user's conscious state. Automatic resource allocation is often issued through orienting response due to the motivational relevance of the stimuli, which is frequently the case when it comes to advertising (Lang, 2009). The present study will focus on motivationally relevant stimuli in the form of celebrity tweets. Specifically, the study focuses on how varying levels of self-disclosure used by celebrities' in their tweets affects the tweet's motivational relevance, assuming that the tweets with the most disclosure will be the most motivationally relevant.

When it comes to implementing the LC4MP framework, there are three primary categories of variables: those related to motivated cognition, those related to message content and structure, and those related to the media user. The present research will focus on variables related to motivated cognition. Specifically, it will focus on motivational activation. According to the LC4MP, the motivational relevance of a message will evoke automatic resource allocation. Motivational relevance is the extent to which the message is communicating something that has to do with survival or thriving in your environment (Lang, 2009). In his book, *Descartes' Error*, leading neuroscientist Antonio Damasio (2000) explained this concept by stating that, at a basic level, when the brain sees stimuli, it triggers a body response, such as flight or fight. Since this response is instinctual, it therefore activates the appetitive (approach) or aversive (avoid) system of the brain, with positive stimuli activating the appetitive and negative activating the aversive (Lang, 2009). Since the motivational and cognitive systems are constantly working together, the level of cognitive resources required to process a message relates to the level of

activation in the motivational systems (Lang, 2009). For example, research discovered when a message activates the appetitive system; it is thought that more resources are allocated to encoding and storage as the level of activation increases. On the contrary, when a message activates the aversive system, fewer resources are allocated to encoding and shift toward problem solving or figuring out how to get away from the dangerous stimuli (Lang, 2009). This leads to the assumption that an advertisement or promotional message which contains positive stimuli may be easier for a consumer to remember or recall at a later date. However, if the stimulus is not motivationally relevant to the consumer, the process may not occur at all. Thus, it is important to understand what types of stimuli are motivationally relevant in order to understand the best way to reach a consumer with a message. If marketers want consumers to approach their tweets/ Facebook posts, etc., the content of a social media post must be motivationally relevant to the individual who sees it because according to SocialMediaToday, “our reptilian brain doesn’t care what you’re reporting on Twitter unless it pertains to us” (Cohen, 2009), meaning consumers are more interested in material that is rewarding for them. Specifically, consumers may be more interested in reading a tweet about a celebrity’s favorite places to eat because this personal information is something a celebrity may only tell their friends and the fact the consumer now knows this information is rewarding in itself.

According to Lang (2009), stimuli can be motivationally relevant because of physical characteristics, because they have been learned, or because they are innate to human behavior. Some aspects of motivational relevance are consistent across all people where others are cultural or individual. The present study is focused on the cultural aspect

of motivational relevance as it pertains to parasocial relationships with celebrities.

Previous research has shown that people often pursue parasocial relationships in order to find out more information about a person (Labrecque, 2014). Thus, if a message contains personal information about a celebrity, it is assumed to be motivationally relevant to the consumer. For the purpose of this study, motivationally relevant stimuli is synonymous with the independent variable “celebrity disclosure” which refers to a message with any personal or intimate detail about the celebrity. LC4MP argues that motivational relevance underlies and activates emotional experience. Thus, by measuring emotional experience, one can infer motivational activation. Understanding emotional experience is key since emotions often drive decision-making (Naqvi, Shiv, & Bechara, 2006).

Measuring emotional experiences. Previous research suggests there are three primary ways to measure data related to emotional experience: self-report, physiological, and behavioral (Bradley, 2000). The LC4MP uses self-report and physiological indicators to measure emotional experience. According to the dimensional emotion theory, which is used by the LC4MP when measuring motivational experience, emotion is conceptualized as an affective experience that emerges from basic motivational processes (Lang & Bradley, 2008) and is distributed across an emotional space which is defined by two dimensions of motivation: direction, which refers to motivated behavior that ranges from approach to avoid, and intensity which refers to the strength of approach and avoid responses (Dickinson & Dearing, 1979). Under this approach, direction of motivated behavior represents pleasant versus unpleasant emotional responding in the dimension known as valence and intensity represents the arousal (calm or excited) dimension of emotion. The present study will use the physiological measure of facial

electromyography (EMG) to measure emotional valence by indexing positive and negative emotional experiences and thus, activation of appetitive and aversive systems (Lang, 2009). Increased activity in the corrugator muscle region will be used to indicate negative emotional experience and thus aversive activation while increased activity in the zygomatic and orbicularis oculi muscle regions will be used to indicate positive emotional experience and appetitive activation.

Facial EMG is a technique used to evaluate the physiological properties of facial muscles. Previous studies found that EMG is a powerful instrument to study voluntary and involuntary facial muscle movements, which may reflect the conscious and subconscious emotional expressions (Dimburg, Thunberg, & Elmehed, 2000; Larsen, Norris, & Cacioppo, 2003). Bolls, Lang, and Potter (2011) found that radio advertisements with a positive emotional tone elicited stronger zygomatic muscle activity, while radio ads with a negative emotional tone elicited stronger corrugator muscle activity. EMG has also been used to measure emotional responses to two different versions of an advertisement that appear to be identical to the conscious mind. The results found that the advertisement which contained a model's body movements, versus just her face, elicited stronger corrugator activity (Ohme, Reykowska, Wiener, & Choromanska, 2009). Another study measuring emotional reactions to TV advertisements found that facial EMG responses are closely related to emotion-congruent events in ads and EMG responses may be more related to brand recall than self-report data (Hazlett & Hazlett, 1999). Thus, participants may not be aware they are experiencing an emotion when they answer a self-report questionnaire about a brand but their facial expressions recorded by EMG may say otherwise. Further EMG research has been conducted with various

stimulus types including pictures, sounds, words and imagery. A compilation of the results from prior studies utilizing EMG led to the general conclusion that positive stimuli elicits more intensive activity from the zygomaticus major and orbicularis oculi muscles, and negative stimuli elicits more activity from the corrugator muscle (Bolls et al., 2011; Larsen et al., 2003; Ohme et al., 2009). The present study used EMG to analyze whether there are any significant differences in facial muscle activity when reading a tweet with celebrity disclosure on Twitter. Since this tweet is seeking to meet one of the consumer's needs, such as acquiring intimate information about a celebrity, it is considered positive, emotionally relevant stimuli. Therefore,

(H1): A tweet with high celebrity disclosure will result in the greatest positive emotional response as indicated by the zygomaticus major and orbicularis oculi muscle activity region followed by moderate disclosure tweets and then low disclosure tweets resulting in the least positive emotional response.

(H2): A tweet with low celebrity disclosure will result in most negative emotional response as evidenced by corrugator supercilii muscle region activity followed by moderate disclosure tweets and then high disclosure tweets resulting in the least negative emotional response.

Since the tweet contains positive, motivationally relevant stimuli, the appetitive system will be activated. By activating the appetitive system, the tweet will also be encoded better. Thus, participants may be able to recognize facts about the tweet and whom the tweet was from when asked questions regarding their memories.

(H3): A tweet with high celebrity disclosure will result in higher celebrity recognition during speeded recognition test followed by moderate disclosure tweets and then low disclosure tweets.

The LC4MP typically uses self-reports of arousal to indicate the level of activation in the motivational systems. However, this research will utilize another physiological measure, skin conductance (SC), to indicate emotional arousal. SC is based on the analysis of change in galvanic skin responses when the sympathetic nervous system is engaged (Ohme et al., 2009). Previous research found SC to be a possible indicator of the orienting response, reflecting the automatic increases that occurs when paying attention to novel stimuli (Potter & Bolls, 2012). However, SC could also be a reflection of the emotional-motivational responses elicited by motivationally relevant stimuli (Potter & Bolls, 2012), which is of relevance to the particular study. Previous SC research found that playing a computer game against a human versus playing against a computer is more emotionally arousing, based on the increase in SC levels (Ravaja, 2009). Other research analyzing arousal during differentiating scenes in a television advertisement found levels of arousal to increase when viewing a scene that contained a model's face as well as a sweeping hand gesture (Ohme et al., 2009). In general, Dawson, Schell, and Fillion (2007) found that activity in the sympathetic nervous system, which is indicated by skin conductance, is positively correlated with motivational activation. Due to the motivations behind parasocial relationships, celebrity disclosure is assumed to be motivationally relevant and activates the appetitive system. Thus, it should also be more arousing as well. This leads to the following hypothesis:

(H4): A tweet with high celebrity disclosure will result in greater physiological arousal than tweets with low celebrity disclosure and moderate celebrity disclosure, as evidenced by higher skin conductance level.

Truly understanding the phenomenological processes of a consumer's mind when processing a mediated message also requires the incorporation of meaningful self-report measures (Potter & Bolls, 2012). This is clearly the case in advertising and public relations where self-report measures are frequently used to index the responses related to brand attitude, the persuasion of a message as well as behavioral intentions. Based on the literature of parasocial interaction, several consumer behaviors that tweets with high celebrity disclosure are thought to influence are indexed here. These include feelings of PSI, attitude towards the celebrity, and behavioral intentions. The following hypotheses are proposed:

(H5a): A tweet with high celebrity disclosure will result in higher reported levels of PSI on the PSI scale than tweets with low celebrity disclosure and moderate celebrity disclosure.

(H5b): A tweet with high celebrity disclosure will result in more favorable attitudes towards the celebrity than tweets with low celebrity disclosure and moderate celebrity disclosure.

(H5c): A tweet with high celebrity disclosure will result in more reported behavioral intentions such as intention to view a show, purchase likelihood, or attendance likelihood than tweets with low celebrity disclosure and moderate celebrity disclosure.

In this experiment, the impact of celebrity disclosure on these consumer behavior variables will be tested and any relationships with embodied motivated processing of celebrity tweets will be discussed.

The following methodology was utilized in order to investigate the hypotheses presented.

Chapter 3: Methodology

Study Design and Participants

This study employed a single factor fractionated experimental design with one independent variable containing three levels: celebrity disclosure (low v. moderate v. high). Celebrity disclosure was manipulated within subjects. The study contained three different conditions for each participant to be assigned to. Block randomization occurred within the condition to control for order effects. By using a fractionated design, each celebrity was experienced in the form of low, moderate, and high disclosure tweets. Thus, celebrity was a repeated measures factor. The researcher created the tweets used as stimulus material. By creating tweets, the researcher was able to strategically manipulate the level of disclosure in each celebrity's tweet in order to test the proposed hypotheses. Participants were debriefed after the experiment and informed of the fictitious nature of the celebrities and their tweets.

A power analysis using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) was conducted to determine the necessary sample size needed for this study. Parameters chosen for the power analysis were selected based on the statistical test with the least power, this being a repeated measures ANOVA for the self-report questions. If the sample size is met for this test, then all other statistical test should be sufficiently powered using the same sample size. Using the ANOVA: repeated measures, within factors statistical test with an effect size of $f = 0.15$, $\alpha = 0.05$, $power = 0.9$, three groups and 36 measurements, the results indicated that a total sample size of 45 is necessary. Fifty-five participants were recruited from Missouri Journalism School using

convenience-sampling procedures. Professors of journalism courses were contacted and asked if they would announce the study to their classes. There were 30 women and 25 men ($M_{age} = 19.25$, $SD = 1.430$). A majority of the participants were freshmen (50.9%) followed by juniors (23.6%), sophomores (16.4%), seniors (7.3%), and graduate students (1.8%). Forty-two participants identified themselves as White or Caucasian, two as Black or African American, one as Hispanic, nine as Asian, and one as “other”. Participants were offered extra credit points as compensation for participating in the study.

Stimulus Materials

This study used tweets from up and coming celebrities in the entertainment genre as stimuli. The 12 celebrities used were fictitious and created for the purpose of this study in order to eliminate any pre-conceived notions participants could potentially have towards a “real-life” celebrity. The names for each celebrity were created using an online name generator. The celebrities’ biographies were formatted to slightly prime the participants toward the celebrities’ entertainment genres without revealing too many personal details. Headshots for each celebrity were stock photos from Shutterstock.

Since the celebrities used in the study were fictitious, the mock tweets were as well. In order to closely mimic the design of the Twitter, an online fake tweet generator was used to create the tweets. A low, moderate, and high disclosure version of a tweet for each celebrity was created using the categories in Jourard and Lasakow’s (1958) self-disclosure questionnaire. Thus, 36 tweets were created for this study. There were 12 tweets in each of the three conditions and each condition contained four low disclosure tweets, four moderate disclosure tweets, and four high disclosure tweets.

In order to record a meaningful orienting response, stimuli must be presented for at least eight seconds. After pretesting the stimuli on a variety of people, it was concluded that eight seconds was not a long enough time period for participants to read the tweet as well as notice which celebrity the tweet was coming from. However, pre-test participants did indicate that 10 seconds was enough time and therefore was established as the total viewing time per tweet. MediaLab and DirectRT software were used for stimulus presentation.

Independent Variable

Celebrity disclosure is conceptualized as a message that contains “openness in communication” which is defined as “the act of revealing information to a viewer that builds intimacy and trust” (Labrecque, 2014, p. 137). Previous research in parasocial interaction described this concept as “breaking the fourth wall,” where the celebrity or media figure breaks away from his or her perceived role to reveal personal information about him or herself to the viewer (Auter, 1992). According to Social Penetration Theory (SPT), people reveal information to each other over the course of a relationship and the present study will utilize the information revealed during the first three stages: orientation, exploratory affective, and affective. In the present study, low celebrity disclosure is equivalent to the orientation stage of the SPT. However, instead of engaging in small talk, the celebrity’s message is strictly promotional. Moderate celebrity disclosure is equivalent to the exploratory affective SPT stage. The tweets in this stage consist of a person’s likes and dislikes and the content for these tweets was created using the Tastes and Interests section of Self-Disclosure Questionnaire (1958). The third level of the IV is high celebrity disclosure. This level is equivalent to the SPT affective stage

and the information that a person would be more likely to disclose to a best friend. Celebrities' tweets in this stage consist of intimate information created from the Personality and Body section of Self-Disclosure Questionnaire (1958).

An informal pretest was conducted using a Qualtrics survey to test the manipulation of the levels of the independent variable. The survey was randomly distributed through Facebook and 25 responses were recorded. Participants were asked to read a variety of statements, which were analogous with the celebrity tweets created for stimuli. Thus, participants were told to assume the information they were reading was coming from a person they do not know very well. However, this person was trying to disclose information to them to form a friendship. After reading the statements, participants were asked to please rate how much disclosure they believed the statement contained (General, Moderate, and High). Any statement that received 50% or more of the responses in the predicted disclosure category was used for the final experiment. Any statement that did not was reevaluated and edited to more closely mirror the statements that did contain a majority rating in the respective category. The survey contained 36 statements with 12 statements from each disclosure category. Based on the results, only four low disclosure statements, four moderate disclosure statements and two high disclosure statements had to be tweaked before the final experiment.

Dependent Variables

Arousal. Psychological arousal/motivation activation is conceptualized as the intensity of evoked sympathetic arousal during exposure to the messages. This dependent variable was indexed by recording participants' galvanic skin conductance level for a 5 second baseline period prior to the onset of each message, as well as time locked to

message exposure. Skin conductance was recorded utilizing a bipolar placement of 8 mm Ag/AgCl disposable electrodes on the palmer surface of the participant's left hand. A 0.5 V, DC excitation voltage was generated from a skin conductance coupler for signal recording. The signal was amplified using a gain setting of 5 $\mu\text{V}/\text{V}$, a low pass filter was set to 10 Hz, and the signal was sampled at 500 Hz.

Emotional valence. Positive emotional experience is defined as variation in emotional activity in the positive valence dimension of emotion. This measure was indexed by recording the facial EMG signal from the zygomaticus major and orbicularis oculi facial muscle regions. Negative emotional experience is defined as variation in emotional activity in the negative valence dimension of emotion, which was indexed by recording the facial EMG signal from the corrugator facial muscle region. The facial EMG signals were recorded utilizing a bipolar placement of 4 mm Ag/AgCl disposable electrodes for a 5 second baseline period prior to the onset of each message, as well as time locked to message exposure. The signals were amplified using a gain setting of 5K, a low pass filter was set to 500 Hz, a high pass filter was set to 10 Hz, and the signals were sampled at 500 Hz.

Attitude. Attitude toward the celebrity was measured using three 7-point semantic differential scales (Bruner, 2009). The items making up this scale are displayed in Table 1 of the appendix. Cronbach's alpha by condition were 0.75 (Condition 1), 0.94 (Condition 2), and 0.96 (Condition 3).

Behavioral intentions. Behavioral intentions were assessed to measure how likely the participant would be to watch the celebrity's TV show, attend their event, or buy a product endorsed by the celebrity (Bruner, 2009). The scale items are displayed in

Table 2 and were measured using three 7-point semantic differential scales. The items were adjusted depending on celebrity's occupation. Cronbach's alpha by condition were 0.94 (Condition 1), 0.97 (Condition 2), 0.97 (Condition 3).

Parasocial interaction. Previous research has found that openness in communication can lead to the formation of parasocial relationships and these relationships can influence changes in the viewer's attitudes and behaviors (Labrecque, 2014). Parasocial interaction is conceptualized as a one-way relationship that a media user established with a media figure. This was measured to assess PSI's effect on attitude and behavioral intentions as well as disclosure's effect on PSI. PSI was measured using a 5-point Likert scale with responses ranging from (1): strongly disagree to (5): strongly agree. The items for the scale were adapted from Rubin, Perse, and Powell's (1985) Parasocial Interaction scale to fit the parameters of the study and can be found in Table 3. Cronbach's alpha by condition were 0.89 (Condition 1), 0.94 (Condition 2), 0.94 (Condition 3).

Recognition. The research used a speeded recognition test to evaluate if the level of disclosure in the celebrity's tweet influenced participant's recognition of the celebrity. The test asked participants whether they recognized these names as a person they read a tweet from during the experiment and to use the keyboard to quickly answer yes by pressing the right shift key labeled YES or no by pressing the left shift key labeled NO. The test contained the names of all 12 celebrities used in the study as well as names from 6 celebrities who participants did not see tweets from.

Control Variables

In the cover story given to participants at the beginning of the experiment, participants were told they were participating in a study to help marketers and public relations professionals better understand the entertainment genre on Twitter. Thus, in order to enhance the natural flow of the experiment based on participants' expectations of the study, participants were asked to fill out an entertainment preference questionnaire, which consisted of an 18 item, 6 point rating scale, before viewing the celebrity tweets. The scale items were an adaptation of Little and Zuckerman's (1986) Musical Preference Scale. In addition to musical preferences, the scale items also contained questions about the different entertainment categories occupied by the celebrities in this study as well as categories that are not. The scale is displayed in Table 4.

In order to control for memory, participants were re exposed to each tweet before answering self-report questions. The decision to re introduce the tweets to each participant instead of asking the self report questions immediately after the initial exposure to the tweets was made to limit noise in the psychophysiological measures and to more closely imitate the natural tweet viewing process.

Procedure

This experiment was conducted in the Media Brain Lab, a media psychophysiology lab, at the University of Missouri. Participants completed the experiment one at a time while seated in a reclining chair positioned approximately 5 feet from a high definition LCD television set. The researcher welcomed the participant and had him or her read and sign an informed consent form outside of the room where the experiment took place. While the participant completed the informed consent process, the

researcher moved into an adjacent room until the participant was ready. Once signed and completed, the informed consent form was filed away into a study binder for safekeeping. The researcher then instructed the participant to wash their hands with warm water and soap to prep the skin for the collection of skin conductance data. Once the participant returned from the restroom, he or she was taken into the viewing room where the experiment occurred and seated in the reclining chair. Sensors for the collection of skin conductance data were placed on the participant's left hand and the remaining sites for electrode placement were prepped. The researcher wiped the areas of the face where facial EMG sensors were placed with a makeup remover wipe and then gently abraded the areas using an abrasive alcohol skin prep pad. After placing all electrodes, the researcher checked impedance levels of the facial EMG recording sites to note whether low levels of electrical impedance were obtained to validly record muscle activity. If impedance was not low enough (less than 40 Ω s), the sensors were removed, the site re-prepped, and electrodes reapplied. Any high impedance levels were recorded in the study notebook.

After all electrodes were placed, each participant viewed a two-minute nature clip to allow him or her to relax and get accustomed to the laboratory environment. While the participant viewed the clip, the researcher visually inspected the electrode waveforms for signal clarity. After viewing the clip, the experiment began and the participant was provided with a cover story, which described what to expect during the experiment as well as further instructions. After reading the cover story, participants took a quick questionnaire to assess their entertainment genre preferences and read the short biographies for each of the celebrities used throughout the rest of the experiment. After

reading the bios, the participant viewed each tweet for 10 seconds with a blank screen appearing for five seconds prior to the first tweet and in between subsequent tweets. According to LC4MP, a major goal of appetitive activation is information intake meaning as much information as possible about the stimulus being approached and the surrounding environment needs to be encoded (Lang, 2009), which is why participants read the biographies of each celebrity before reading the tweets.

After viewing all the tweets, participants were given a distractor task of watching a two-minute clip from the sitcom Friends. Before the clip, the screen informed participants that the first part of the experiment was over and to sit back and relax before the next part begins then the clip commenced. After viewing the clip, participants were given a speeded recognition test after which the participants answered self-report questions after seeing each tweet for a second time. For example, a tweet for Celebrity A was displayed, and then the participant answered questions about their attitudes, parasocial interaction and behavioral intentions regarding Celebrity A, then a tweet from Celebrity B was displayed and participants answered the same set of questions, but this time about Celebrity B and so on for all 12 celebrity tweets in the condition. Since each celebrity had a different occupation, the behavioral intention items were adapted on a celebrity-by-celebrity basis so the decision to ask the question after re-exposure to the tweet instead of asking all of them at the same time helped ensure participants were certain of who they were answering the questions about. After completing the self-report questionnaire, the participant was disconnected from the physiological recording equipment and debriefed. Finally, the participant was thanked and dismissed.

Chapter 4: Results

Data Cleaning and Reduction

Data obtained from the psychophysiological measures used in this experiment was extracted from the analog waveforms recorded during message exposure. This was done by averaging the data over the entire 10 seconds of viewing time in AcqKnowledge, which yielded a single measurement level for each stimulus tweet. The physiological data was also screened for movement artifact, outliers, and non-responders. If the participant was a non-responder or if any data was unable to be cleaned, the data was removed from the file and not used in the analysis. Once extracted, the data was combined into a master file in SPSS for further data analysis.

Analysis

Change scores for each psychophysiological measure were calculated by subtracting mean physiological activity recorded during the 5 seconds of the baseline period before each tweet from each second of physiological activity recorded during message exposure. The hypotheses for this experiment were tested by submitting the change scores obtained from each of the psychophysiological measures to a 3 (disclosure: low vs. moderate vs. high) x 4(tweet) x 10 (time) repeated measures ANOVA. Additionally, data from the self-report measures were submitted to a 3 (disclosure) x 4 (tweet) repeated measures ANOVA with the exception of PSI, which was analyzed using a three-way ANOVA. Based on the design of the experiment, PSI could not be used as a covariate. Thus, a Pearson correlation coefficient was used to determine PSI's effect on attitudes and behavioral intentions. Data analysis also

revealed that all physiological main effects and interaction terms with time violated the sphericity assumption. Thus, Greenhouse-Geisser degrees of freedom adjustments were made.

Hypothesis 1. Hypothesis 1 stated that a tweet with high celebrity disclosure will result in the greatest positive emotional response as indicated by the zygomaticus major and orbicularis oculi muscle activity region followed by moderate disclosure tweets and then low disclosure tweets resulting in the least positive emotional response. Hypothesis 1 was not supported. A significant effect of disclosure on positive emotion response was not found $F(1.880, 93.979) = 0.371, p = 0.678, \eta_p^2 = 0.007$.

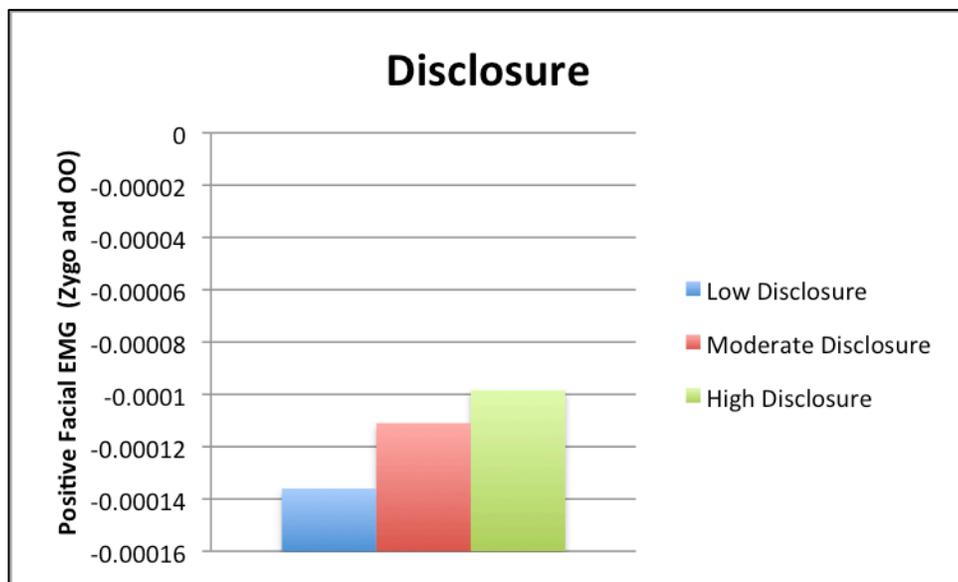


Figure 1. Disclosure and positive facial EMG. This figure illustrates the main effect of disclosure on zygomaticus major and orbicularis oculi muscle region activity.

The interaction between time and disclosure on positive emotional response was also insignificant $F(5.866, 293.320) = 1.254, p = 0.279, \eta_p^2 = 0.024$.

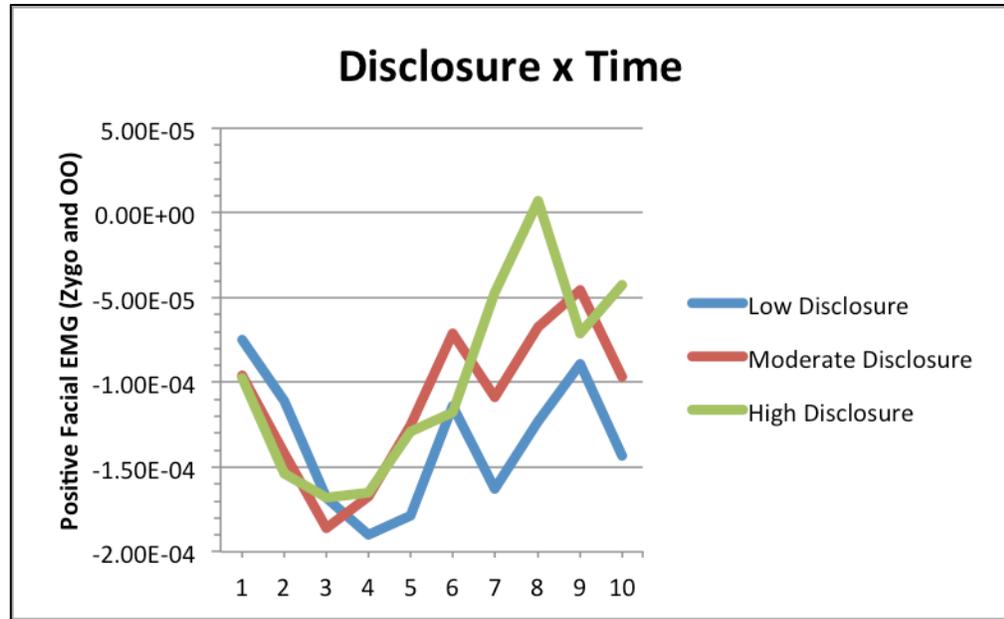


Figure 2. Disclosure, time and positive facial EMG. This figure illustrates the interaction between disclosure and time on zygomaticus major and orbicular oculi muscle region activity.

Hypothesis 2. Hypothesis 2 stated that a tweet with low celebrity disclosure will result in the most negative emotional response as evidenced by corrugator supercilii muscle region activity followed by moderate disclosure tweets and then high disclosure tweets resulting in the least negative emotional response.

Hypothesis 2 was not supported. However, a main effect of disclosure on negative emotional response trended toward significance $F(1.518, 80.431) = 1.889$, $p = 0.167$, $\eta_p^2 = 0.034$.

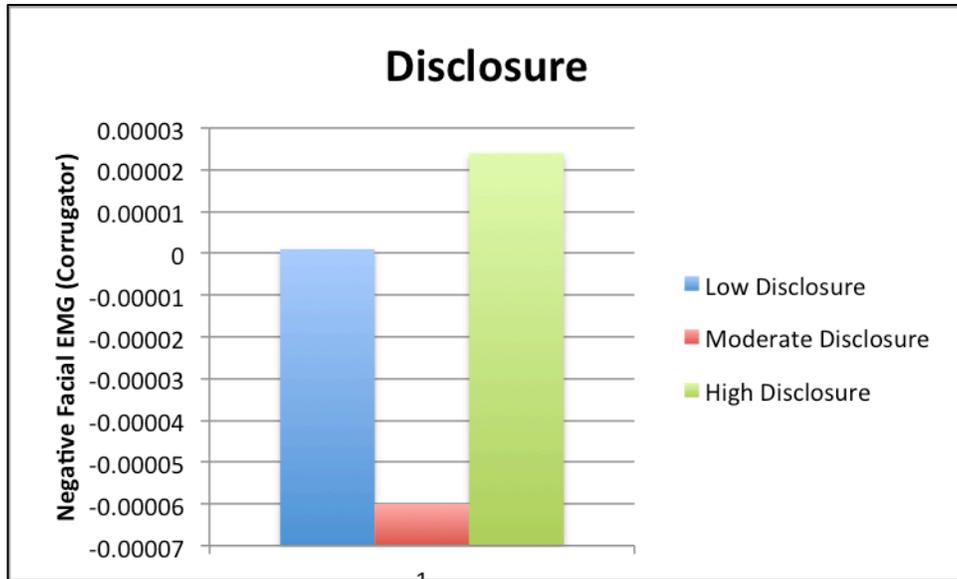


Figure 3. Disclosure and negative facial EMG. This figure illustrates the main effect of disclosure on corrugator supercillii muscle region activity.

The interaction between time and disclosure on negative emotional response was also insignificant $F(2.884, 152.863) = 0.947, p = 0.417, \eta_p^2 = 0.018$.

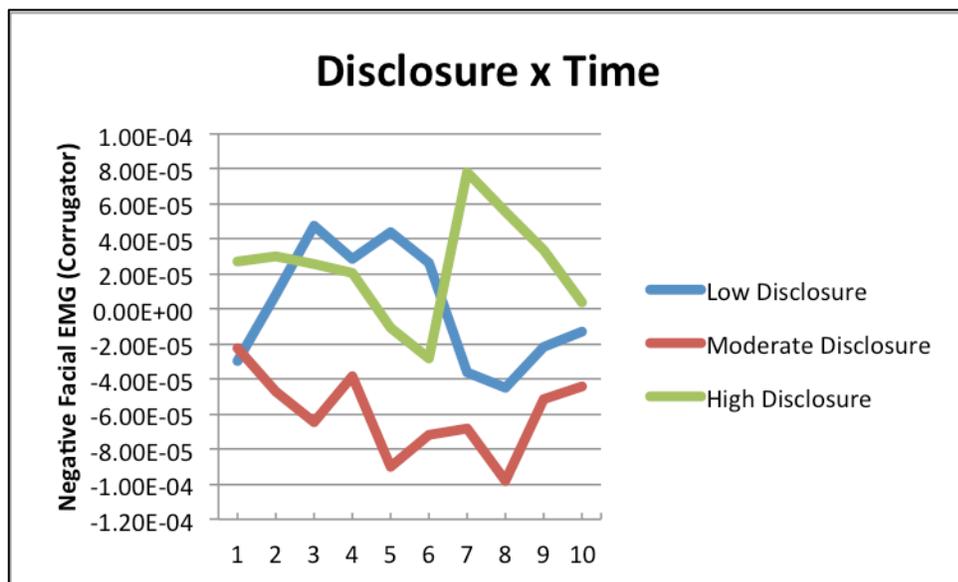


Figure 4. Disclosure, time and negative facial EMG. This figure illustrates the interaction between disclosure and time on corrugator supercillii muscle region activity.

Hypothesis 3. Hypothesis 3 stated that a tweet with high celebrity disclosure will result in the highest celebrity recognition during speeded recognition test followed by moderate disclosure tweets and then low disclosure tweets.

Hypothesis 3 was not supported. There was no significant main effect of disclosure on celebrity recognition $F(2,108) = 0.587, p = 0.558, \eta_p^2 = 0.011$. The means of each level of disclosure were not significantly different from each other. Thus, the level of celebrity disclosure in a tweet did not affect a participant's ability to recognize a celebrity's name.

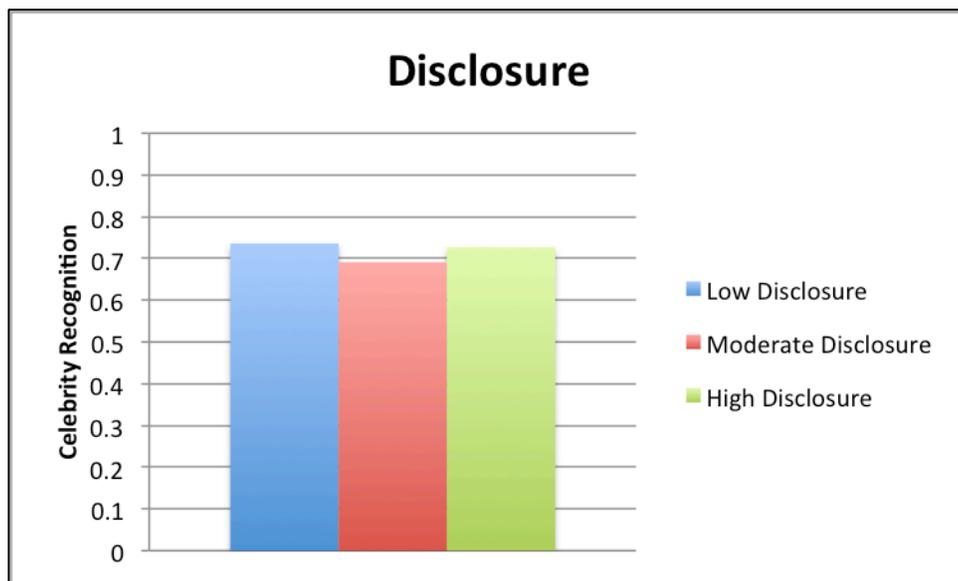


Figure 5. Disclosure and celebrity recognition. This figure illustrates the main effect of disclosure on celebrity recognition.

Hypothesis 4. Hypothesis 4 stated that a tweet with high celebrity disclosure will result in greater physiological arousal than tweets with low celebrity disclosure and moderate celebrity disclosure, as evidenced by higher skin conductance level.

Hypothesis 4 was not supported. No significant main effect of disclosure on skin

conductance was found $F(1.920, 101.754) = 0.642, p = 0.522, \eta_p^2 = 0.012$.

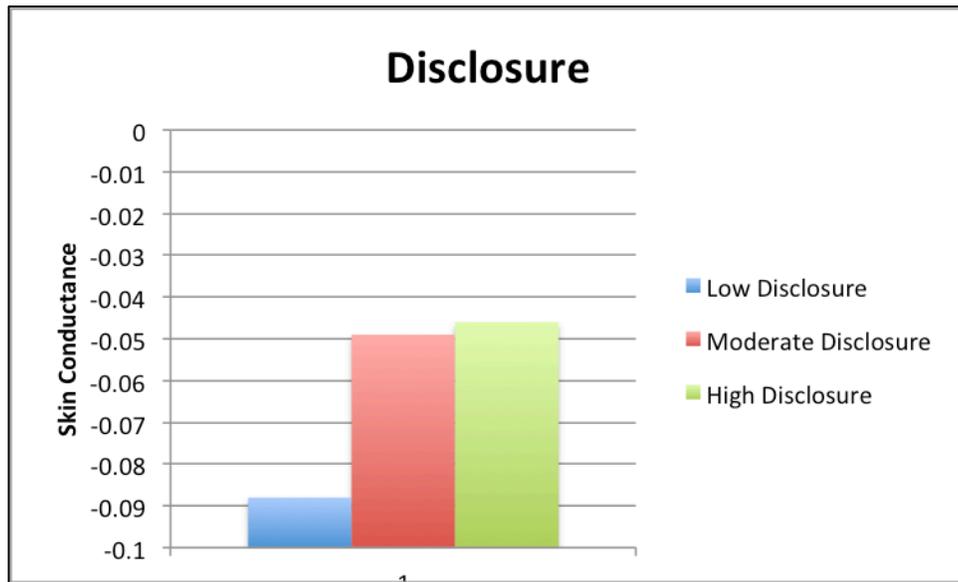


Figure 6. Disclosure and skin conductance. This figure illustrates the main effect of disclosure on skin conductance.

The interaction between disclosure and time on skin conductance was also not significant $F(3.427, 181.644) = 0.385, p = 0.790, \eta_p^2 = 0.007$.

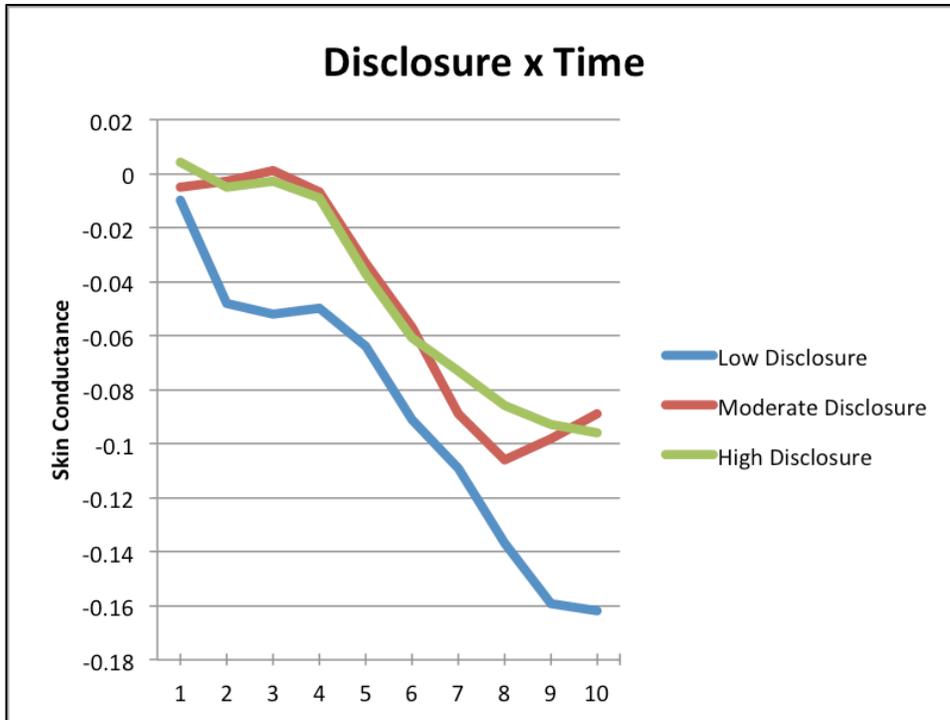


Figure 7. Disclosure and skin conductance. This figure illustrates the interaction between disclosure and time on skin conductance.

Self report. Self-report data lends additional insight into the nature of disclosure and the effects of self-disclosure on consumer behaviors.

Parasocial interaction. Hypothesis 5a stated that a tweet with high celebrity disclosure will result in higher reported levels of PSI on the PSI scale than tweets with low celebrity disclosure and moderate celebrity disclosure.

A significant main effect of disclosure on parasocial interaction was found $F(2, 108) = 31.312, p = 0.000, \eta_p^2 = 0.367$, such that high disclosure tweets results in higher reported PSI ($m = 3.546, se = 0.078$) followed by moderate disclosure tweets ($m = 3.537, se = 0.058$) and low disclosure tweets ($m = 3.031, se = 0.066$). A pairwise comparison revealed that all means are significantly different from each other ($p < 0.05$) except for

moderate disclosure and high disclosure. Hypothesis 5a was partially supported.

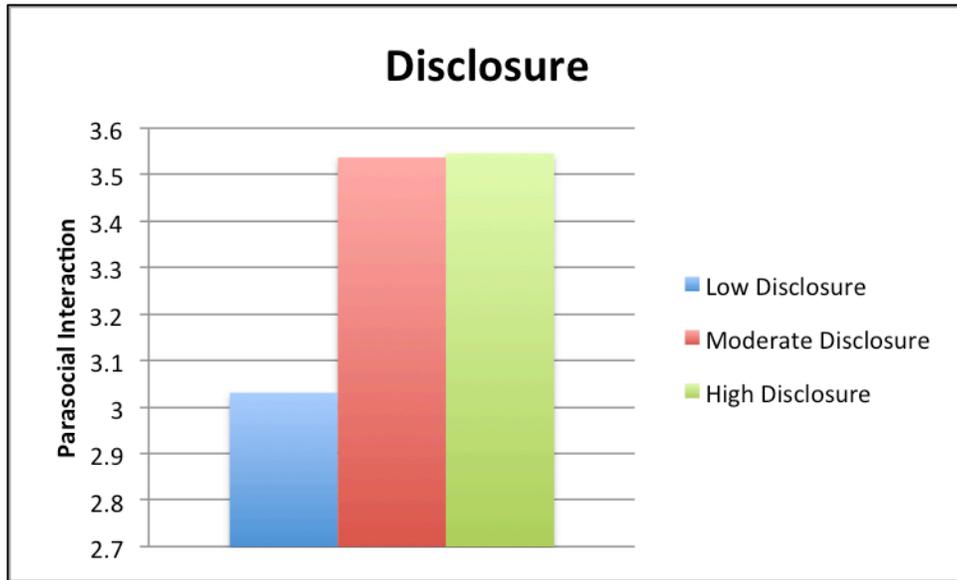


Figure 8. Disclosure and parasocial interaction. This figure illustrates the main effect of disclosure on parasocial interaction.

Attitude towards the celebrity. Hypothesis 5b stated that a tweet with high celebrity disclosure will result in more favorable attitudes towards the celebrity followed by moderate disclosure tweets and then low-disclosure tweets. A significant main effect of disclosure on attitude towards the celebrity was found $F(2,108) = 10.807, p = 0.000, \eta_p^2 = 0.167$. A comparison of the means revealed that each level of disclosure is significantly different from each other ($p < 0.05$) with the most difference occurring between low and moderate. Participants reported the most favorable attitudes towards the celebrity when viewing tweets with moderate disclosure ($m = 5.214, se = 0.110$), followed by high disclosure ($m = 4.903, se = 0.129$) and then low disclosure ($m = 4.597, se = 0.109$). Hypothesis 5b was not supported.

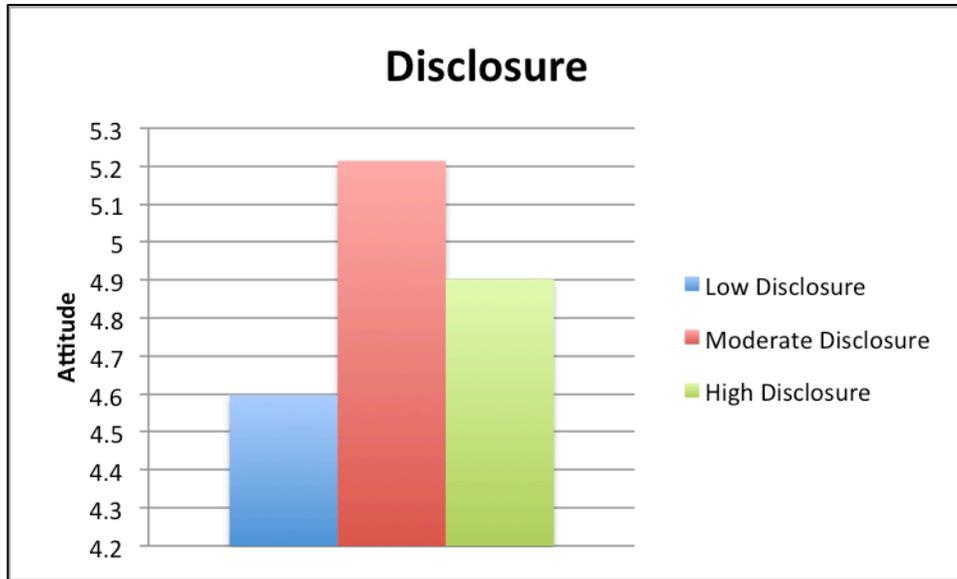


Figure 9. Disclosure and attitude. This figure illustrates the main effect of disclosure on attitude towards the celebrity.

Behavioral intentions. Hypothesis 5c stated that a tweet with high celebrity disclosure will result in the most reported behavioral intentions followed by moderate disclosure tweets and then low disclosure tweets.

A main effect of disclosure on behavioral intentions approached significance, $F(2,108) = 2.502, p = 0.087, \eta_p^2 = 0.044$. However, a pairwise comparison of the means detected a significant difference ($p < 0.05$) between low disclosure ($m = 2.906, se = 0.159$) and high disclosure ($m = 3.198, se = 0.170$). A significant difference ($p < 0.05$) also exists between low disclosure and moderate disclosure ($m = 3.126, se = 0.151$) while moderate and high disclosures are not significantly different from each other. Hypothesis 5c is not supported.

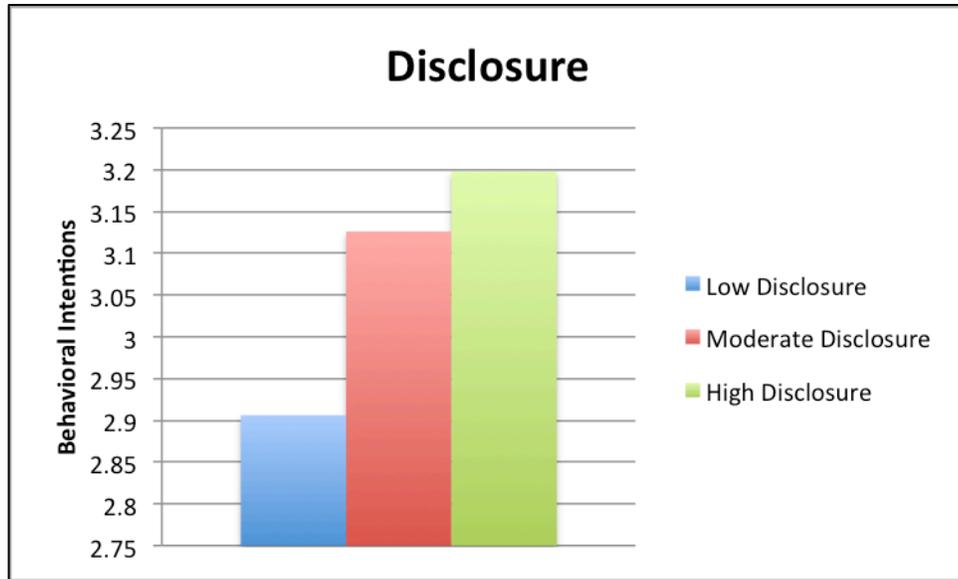


Figure 10. Disclosure and behavioral intentions. This figure illustrates the main effect of disclosure on behavioral intentions.

A post-hoc analysis was conducted to further analyze the correlation between parasocial interaction and consumer behavior. The results found a positive correlation between low PSI and low attitude, and low PSI and low behavioral intentions; a positive correlation between moderate PSI and moderate attitude, and moderate PSI and moderate behavioral intentions, and positive correlation between high PSI and high behavioral intentions with the strongest correlation occurring between high PSI and high attitudes.

		Correlations					
		LOWATT ITUDE	LOWBEH AVIOR	MODATT ITUDE	MODBEH AVIOR	HIGHATT ITUDE	HIGHBE HAVIOR
LOWPSI	Pearson Correlation	.676**	.574**	.291*	.320*	.305*	.355**
	Sig. (2-tailed)	.000	.000	.031	.017	.023	.008
	N	55	55	55	55	55	55
MODPSI	Pearson Correlation	.310*	.282*	.675**	.452**	.223	.030
	Sig. (2-tailed)	.021	.037	.000	.001	.102	.827
	N	55	55	55	55	55	55
HIGHPSI	Pearson Correlation	.258	.123	.302*	-.001	.787**	.412**
	Sig. (2-tailed)	.057	.372	.025	.996	.000	.002
	N	55	55	55	55	55	55

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Figure 11. Correlation coefficients. This figure illustrates the correlations between parasocial interaction, attitude towards the celebrity and behavioral intentions.

Chapter 5: Discussion

This study investigated the effect of self-disclosure in celebrity tweets on message processing, parasocial relationships, attitudes, and behavioral intentions. Using the theoretical framework of the LC4MP, which proposes that the processing of media content is driven by motivation and emotion, the study hypothesized that more motivationally relevant messages would lead to higher indications of positive emotional responses. Motivational relevance is conceptualized as any stimuli that have to do with thriving or surviving in an environment and can activate the appetitive or aversive system (Lang, 2009). Previous research in neuromarketing found that the motivational relevance of a message is extremely important because consumers are only concerned with messages that directly affect them. Based on this and the knowledge that people form relationships by seeking information about another person (Labrecque, 2014), this study conceptualized motivationally relevant content as a tweet containing personal information about a celebrity. Thus, psychophysiological measures were recorded to assess if tweets with the highest level of disclosure were the most motivationally relevant based on Lang's (2009) theory that the measuring of emotional processing can lead to inferences regarding motivational activation. The current study measured the emotional processing of these tweets by recording skin conductance as a measure of psychological arousal, corrugator supercilii muscle region activity as a measure of negative emotional response, and zygomaticus major and orbicularis oculi muscle region activity as a measure of positive emotional response while viewing the celebrity tweets. Participants were also asked to respond to self-report questions regarding

various outcomes associated with self-disclosure including parasocial interaction, attitude toward the celebrity, and behavioral intentions.

According to Lang's (2009) dimensional theory of emotion, emotions are experienced across a space defined by two dimensions: valence and arousal. By measuring those dimensions, one can infer motivational activation. Hypotheses 1 and 2 are concerned with measuring emotion in the dimension of valence. Hypothesis 1 states that a tweet with high celebrity disclosure will result in the most positive emotional responses. Since a tweet with high celebrity disclosure contains personal information about a celebrity that may be of interest to the reader, it is thought to activate the appetitive system and thus lead to positive emotion indicated by muscle activity in the zygomaticus major and orbicularis oculi since previous research has found that the simultaneous activation of both muscles reflects genuinely pleasant emotional experience (Ekman, Davidson, & Friesen, 1990). An analysis of the combination of both muscle activities found that disclosure did not have a significant effect. Though not significantly different from each other, the mean for the low disclosure level was the lowest, followed by moderate and then high, which aligns with the projected hypotheses. The interaction between disclosure and time on positive facial muscle activity was also insignificant. However, the means trended toward the projected direction, though not significant, with high disclosure tweets having higher levels of positive muscle activity. H1 was not supported.

H2 stated that tweet with low celebrity disclosure would result in highest levels of negative emotional response. Since low celebrity disclosure tweets contained promotional messages and were the opposite of high disclosure tweets, the research theorized that low

disclosure tweets would activate the aversive system and therefore lead to muscle activity in the corrugator supercilii, inferring negative emotional experience. An analysis of the corrugator muscle activity found that a main effect of disclosure was trending toward significance but there was no significant interaction between disclosure and time on negative emotional experience. Hypothesis 2 was not supported. While there was no significant difference between the means, the direction of the means does raise an interesting point. The hypotheses predicted low disclosure tweets would have the most negative responses and high disclosure tweets would have the lowest. However, the means show that high disclosure tweets actually had more negative responses, followed by low with moderate having the least. The possible explanation for this could be that some of the high disclosure tweets contained information that seemed too personal to be reading about a stranger, indicating negative emotions. Since the moderate disclosure tweets contained information that a person would tell an acquaintance, such as the celebrity's favorite place to eat, participants may have felt more comfortable reading that information. The results from self-report questions discussed later in the paper can be used along with these results to further understand participant's feelings towards high disclosure tweets.

In general, the results from facial electromyography analysis did not yield significant results. However, the lack of significance does provide some insight since empirical research using facial EMG to understand emotional responses to social media messages is lacking. Thus, this study concluded that one tweet displayed on a screen for 10 seconds is not motivationally relevant enough to cause a significant difference in muscle activity to indicate positive and negative emotional responses.

The LC4MP's theory of the embodied mind along with more informed research on attention paid to mediated messages posits that memory for mediated messages is driven by the interaction between cognitive resources allocated and specific characteristics of the message (Potter & Bolls, 2012). Thus, hypothesis 3 stated that tweets with high celebrity disclosure would result in the highest celebrity recognition during the speeded recognition test. The analysis found there was no significant effect of disclosure on celebrity recognition. Based on the results, the level of disclosure of celebrity tweets was not a motivationally relevant enough message characteristic to affect the participant's memory of the celebrity since high disclosure tweets did not result in more celebrity recognition than low disclosure tweets. Thus, hypothesis 3 was not supported. In order to clear the contents of short term memory after exposure to the last message, participants viewed a two-minute distractor clip at the end of the first part of the study before beginning the speeded recognition test. However, this may not have been enough time to allow the effects of participants' short-term memory to pass. This study could be repeated using a longer distraction clip or a distractor task before the recognition test to see if the outcome is different. The present study also did not analyze the time it took to for participants to respond. Therefore, it is unknown if level of disclosure affected reaction time.

Hypothesis 4 stated that high disclosure tweets would be the most arousing. Based on the same assumptions that were made for emotional valence regarding motivational activation and the appetitive system, high disclosure tweets should result in the greatest levels of arousal as indicated by high skin conductance levels. An analysis found that disclosure did not have a significant effect on the level of arousal. A further look at the

means did not indicate a significant difference between the levels but it did show that low tweets were less arousing while moderate and high disclosure tweets indicated similar levels of arousal. The interaction of time and disclosure also did not have a significant effect on arousal but the direction of the means at each second did trend towards the predicted direction. Thus, hypothesis 4 was not supported. Previous research using skin conductance measures to analyze the processing of social media messages is sparse. Thus, this research attempted to contribute to the lack of empirical research in the area. Though the results are insignificant, the experiment provides a baseline to start from; specifically the knowledge that one tweet shown for 10 seconds is not motivationally relevant enough to activate arousal.

Although the hypotheses regarding psychophysiological measures were non significant, this information still tells a great deal about the effect of self-disclosure in tweets on motivation. The strength of psychophysiological measures is the ability to capture less conscious dimensions of processes underlying the mental experience of consuming and being influenced by media (Potter & Bolls, 2012). Thus, psychophysiological measures are able to index unconscious experience and mental activity that individuals are unable to report. The use of psychophysiological measures for this study sought to understand the psychological states that a participant experiences while processing a celebrity tweets with varying levels of disclosure. The results concluded that the experience of consuming one celebrity tweet with various levels of disclosure was not motivationally relevant enough to influence emotional processing when read in the moment. However, the results of the psychophysiological data do not fully describe all the experiences evoked by embodied mind since the interaction between

the human mind and mediated messages produces much more than just biological activity reflective of emotional processes, which is why an incorporation of valid self-report measures is necessary (Potter & Bolls, 2012). Whereas self-disclosure may not effect real-time emotional processing of one tweet, its impact on consumer behavior can be seen through an analysis of self-report measures.

The self-report measures used in this study sought to better understand the relationships between self-disclosure and parasocial relationships, which effects attitudes and behavioral intentions. The results found that self-disclosure does have a significant effect on parasocial relationships. Specifically, there is a significant difference in feelings of parasocial interaction between low disclosure and high disclosure, while moderate and high disclosure are relatively the same. Thus, any self-disclosure at all is important in forming a parasocial relationship. This supports previous research in relationship marketing that states the importance of open communication and disclosure in the formation of relationships. Parasocial relationships can also predict outcomes. In order to test this prediction, a correlation analysis was conducted and found the strongest correlation between high PSI and high attitudes. Thus, participants who reported high levels of PSI also reported the most favorable attitudes towards the celebrities. This finding aligns with previous studies that found as PSI increases, so do attitudes towards the message and media figure (Rubin et al., 1985; Rubin & Step, 2000).

In addition to disclosure having a significant effect on PSI, which is positively correlated with behaviors and attitudes; disclosure also had a significant effect on attitude. Previous research in branding and consumer responses found that artists and other media figures can serve as their own brand managers, ultimately engaging and

promoting themselves as products in their respective markets (Schroeder, 2005). Thus, consumer's attitudes towards a celebrity can also be reflective of their attitude towards the celebrity's entire brand, and since attitudes are predictors of purchase intentions, understanding what drives consumer attitudes is important. The results from this study found that tweets with moderate levels of disclosure resulted in the most favorable attitudes towards the celebrity. While this finding does not support the hypothesis which predicted high disclosure tweets would elicit the most positive attitudes, it does align with the trends present in the facial EMG data which found higher negative emotional responses for high disclosure tweets and the least for moderate. These two findings together, along with high PSI's strong correlation to high attitudes, seem to indicate that while all disclosure is good, higher levels of disclosure may be more receptive when a strong parasocial relationship is already formed. This aligns with social penetration theory, which states that non-intimate conversation is usually involved in the second step of relationship building (Dwyer, 2000). Thus, moderate levels of disclosure, which yielded the most favorable attitudes, may be the best way for a celebrity who does not already have a strong fan base to approach social media, with disclosure increasing as the relationship grows. In addition to self-disclosure's role in PSI and attitude, it also has an effect on behavioral intentions.

Based on previous research, which suggested that open communication in a relationship leads to certain outcomes such as increased purchase intentions or willingness to watch more episodes of TV show (Park & Lennon, 2004; Skumanich & Kintsfather, 1998), this study also analyzed the effect of disclosure on behavioral intentions, which approached significance. The significant difference in the means

indicated that tweets with high disclosure elicited the highest behavioral intentions, followed by tweets with moderate disclosure and low disclosure. Thus, participants who viewed a tweet with high celebrity disclosure from a celebrity indicated they were most likely to attend the celebrity's next concert or download celebrity's new single on iTunes. Participants who saw a strictly promotional tweet did not indicate behavioral intentions near as high as the other two levels of disclosure, which supports previous research that states disclosing personal information can have positive relationship outcomes such as predicted behavioral intentions. In addition, the positive correlations between PSI and behaviors and attitudes suggest that as PSI increases, so do attitudes and behaviors. Thus, the use of self-disclosure in celebrity tweets is a vital part of relationship marketing and the use of moderate to high self-disclosure can illicit positive outcomes.

Though the hypotheses of this study were not supported, significant, valuable information about self-disclosure was found. By using psychophysiological measures combined with self-report measures, a better understanding of mental experiences while consuming media is possible. However, the best theoretical and practical implications are found when researchers view psychophysiological and self report measures as indexing distinct, independent concepts that are related in ways the surpass simple correlations (Potter & Bolls, 2012). This study used psychophysiological measures to index emotional processing of self-disclosure in celebrity tweets while self-report items were used to obtain meaningful psychological states such as behaviors and attitudes that emerge from emotional processing of self disclosure in celebrity tweets. Based on the results, the study concluded that self-disclosure in one tweet is not a motivationally relevant enough to influence emotional processing when it is read in the moment. While

psychophysiological measures observe embodied mental activity as it unfolds across time, one of the strengths of self-report measures is the ability to reflect the output of a conscious state of the message recipient at a given moment in time (Potter & Bolls, 2012). Thus, the study concluded that the impact of self-disclosure in celebrity tweets can be seen as a conscious result of reading one tweet, which is supported by the data from self-report measures. The self-report results showed that there was a significant difference in participant's attitudes towards the celebrity based on the level of the disclosure they saw with moderate disclosure resulting in the most favorable attitudes. For PSI and behavioral intentions, low disclosure tweets resulted in low PSI and low behavioral intentions, while moderate and high disclosure tweets performed the same. This allows the research to reach the conclusion that some disclosure is better than no disclosure at all.

While the reading of one tweet for 10 seconds was not motivationally relevant enough to influence emotional processing, further research should investigate whether the viewing of multiple tweets through a simulation of an actual Twitter feed may lead to the tweets becoming more motivationally engaging across time. The fact that one tweet alone does not increase emotional processing is a useful baseline from which further research can build upon. In addition, this study only looked at participant's emotional responses to tweets. Further research could look at emotional processing of other popular social media sites such as Instagram and Vine, which are both highly populated by celebrities.

One of the main limitations for this study was the manipulation of the independent variable. Due to the lack of previous research and theoretical frameworks defining what constitutes low, moderate, and high levels of disclosure, the present

research used a combination of SPT and previous self-disclosure research to create the content for each level of disclosure. However, based on the insignificant difference in the means between moderate and high disclosure tweets, it is obvious that a stronger manipulation is necessary. While the present study did hypothesize that high disclosure tweets would elicit higher emotional processing and higher predicted outcomes based on previous research exploring the motivations behind parasocial relationships, the fact that participants were viewing high disclosure tweets from a stranger is also a weakness of the study which could have influenced participants emotional processing of the tweets since the disclosing of personal information from a total stranger is not common. However, the purpose of the study was to theoretically test the impact of self-disclosure regardless of the celebrity, unknown or not.

Another limitation of the study is the use of fictitious celebrities and tweets, which may have affected participant's responses. Though a majority of the participants stated during the debriefing that they believed the celebrities were real people, often times the accounts one follows on social media are people they have heard of before, meaning results could be different if real celebrities were used. However, using real celebrities had the possibility of introducing a confound since participants could have an affinity for a celebrity and respond in a certain way to the tweets, regardless of what the celebrity said. Lastly, the study was limited to mostly undergraduate students in the journalism school at a large midwestern university, with most of the participants identifying as freshmen. This may have caused the participants to be desensitized to the tweets since tweet viewing is likely an action they partake in on a daily basis. Further

research should be conducted on a more diverse sample size to see if older adults illicit more emotional experiences when processing tweets.

The purpose of this study was to analyze the impact of varying levels of disclosure, regardless of the celebrity, and produce results that could be practically applied to anyone looking to build relationships with consumers. As the results from negative facial EMG and self-reports of attitudes suggest, moderate disclosure may be the best place to start when forming new relationships since the celebrities used in the study were also unknown to the participants. However, the need to utilize social media for self-promotion and thus engage in low disclosure is obvious but based on the results from self-report measures from the study, promotion should not be the only reason a celebrity uses Twitter since low disclosure tweets were always associated with low attitudes and low behavioral intentions. The results indicated that moderate and high levels of disclosure are what participants really want to see since these levels reported the most favorable attitudes and parasocial interaction towards the celebrity. Thus, celebrities should use social media as a way to not only promote themselves and their products, but also as a way engage with fans by sharing personal stories that can lead to perceived intimate connections between celebrities and their fans, fostering a parasocial relationship. Previous research has found that parasocial relationships and attitude are direct predictors of purchase intent and the use of open communication through self-disclosure can increase these feelings, which the results from the present research support. In conclusion, the use of self-disclosure in tweets is an important factor when forming relationships with consumers and needs to be included when creating social

media strategies for celebrities or anyone who is looking to reap the positive benefits of a parasocial relationship and its associated outcomes.

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Appendix A

Tables of measurement scales used

<p>Table 1</p> <p><i>Attitude Towards the Celebrity Scale</i></p>	
<p><u>Items</u></p> <p>My overall impression of [celebrity] is:</p>	<p><u>Responses</u></p> <ol style="list-style-type: none"> 1. Bad/Good 2. Unfavorable/Favorable 3. Negative/Positive

<p>Table 2</p> <p><i>Behavioral Intentions Scale</i></p>	
<p><u>Items</u></p> <p>How likely are you to [view the next episode of [celebrity's television show]]?</p> <p>How likely are you to [listen to celebrity's new album]?</p> <p>How likely are you to [attend celebrity's concert]?</p>	<p><u>Responses</u></p> <ol style="list-style-type: none"> 1. Unlikely/Likely 2. Improbable/Probable 3. Unwilling/Willing

<p>Table 3</p> <p><i>Parasocial Interaction Scale</i></p>	
<p><u>Items</u></p> <ol style="list-style-type: none"> 1. [Celebrity] makes me feel comfortable, as if I am a friend. 2. I can relate to [celebrity] 3. I like hearing what [celebrity] has to say. 4. I care about what happens to [celebrity] 5. I hope celebrity can achieve [his or her] goals. 	

Table 4	
<i>Entertainment Preference Questionnaire</i>	
Please indicate how frequently you partake in the following activities.	
<u>Items</u>	<u>Responses</u>
1. Listen to alternative rock music	1. Not at all
2. Watch a drama television series	2. Seldom
3. Read a romance novel	3. Sometimes
4. Listen to 90's Rap	4. Often
5. Watch reality dance shows such as Dancing with the Stars or America's Best Dance Crew	5. Almost always
6. Listen to Christian music	
7. Watch comedy central or other comedy shows such as Last Comic Standing	
8. Listen to electronic dance music	
9. Watch an adventure/action movie	
10. Watch an old western movie	
11. Read a murder mystery novel	
12. Listen to country music	

Appendix B

Celebrity Biographies



Johanna Morton

Johanna Morton, born December 17, 1989 is a stand-up comedian from Omaha, Nebraska. In high school, Morton was voted class clown four years in a row and her senior superlative was Most Likely To Tell a Joke. Comedy has always been a huge part of Morton's life and she hopes to turn her life-long passion into a full-time career with the debut of her Comedy Central mini series this fall.



Vince Goodwin

Vince Goodwin born March 31, 1992 is a comedian and impressionist from Salt Lake City, Utah. Goodwin's knack for comedy did not really begin until his college years, when he decided to join George Washington University's exclusive comedy group receSs on a whim. Goodwin's ability to make people laugh was immediately apparent and after graduation he began touring with The Second City, Chicago's prolific comedy theatre. Now, Goodwin has decided to take his comedy act solo and headline his first stand-up comedy tour.



Bindy Moore

Bindy Moore, born June 15, 1988, is a comedian from Raleigh, North Carolina. Moore's passion for comedy began at the age of 13 when she first saw Amy Poehler on Saturday Night Live. In order to further her interest in comedy, Moore moved to Chicago to study improv at ImprovOlympic. Moore seeks to help other comedians find their place in such a competitive market and next spring, she will do so by serving as a judge and mentor to aspiring comedians on a new reality television talent show.



Dan Asher

Dan Asher born February 23, 1986, is an actor from Long Island, New York. Asher played the lead in his middle school's rendition of Peter Pan and his love for acting has continued ever since. Asher's passion continued into his college years when he studied Drama at NYU's Tisch School of the Arts. Asher's acting skills are now being put to good use as he just finished filming the first season of his digital television series.



Ronda Raine

Ronda Raine, born May 17, 1989, is an actress from Portland, Oregon. Both of Raine's parents were actors and her love for the craft stems from growing up in a house where someone was always rehearsing their lines. After graduating from the Portland Actors Conservatory, Raine went on various auditions before her charm and charisma landed her the role of a lifetime- a recurring character on a network sitcom.



Rina Wen

Rina Wen, born April 20, 1991, is an actress from St Petersburg, Florida. Growing up, Wen always dreamed of being a movie star and when she turned 18, she moved to Los Angeles to turn her dreams into a reality. Wen has starred in various national commercials and made cameo appearances in a handful of network television shows. However, her big break has finally arrived, as she will be starring in this year's biggest Christmas blockbuster.



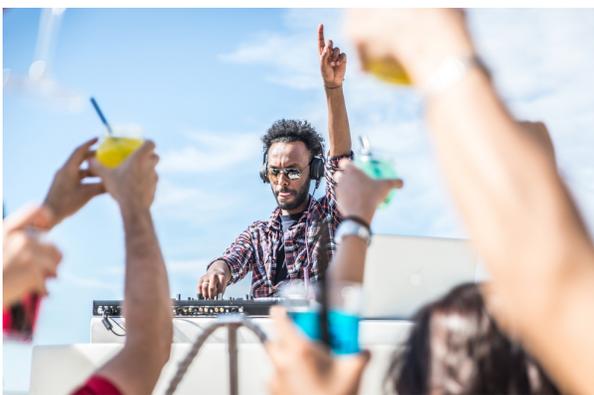
Ted Ford

Ted Ford, born May, 12, 1990, is a singer/songwriter from Nashville, TN. Ford's music career first began at the age of 8 when he performed Garth Brooks "Calling Baton Rouge" in the schools talent show. Ford's love for country music has continued to grow over the years and in 2012 he signed his first record deal with Universal Music Group. His debut self-titled album will be released in November of this year.



Chantel Forrester

Chantel Forrester, born November 2, 1993, is a pop singer from Jackson, Mississippi. As a child, Forrester entered various talent competitions, eventually making her way to the Miss Mississippi pageant, where she wowed the judges and audience with her performance of Etta James "At Last". Though she did not win the pageant, her talent did not go unnoticed and shortly after Forrester signed a record deal with CSP Music Group and will soon be touring the US to promote her first album.



Oscar Guilterio

Oscar Guilterio, born October 31, 1990, is a DJ from Ontario, Canada. Guilterio's love for mixing sounds began when he received his first keyboard at the age of 10. As technology improved over the years, so did Guilterio's ability to combine musical melodies into a way that forces people onto the dance floors of the nation's best nightclubs including Tao Las Vegas and Avalon Hollywood. Based on his disc jockeying success, Guilterio has decided to create an album of his greatest club mixes.



Kenton Parks

Kenton Parks born, July 4, 1991, is a hip-hop dancer from Denver, Colorado. Parks love for dancing began during his childhood when he saw the performances of New Orleans street dancers during a family vacation. He immediately strived to copy the choreography he had seen and his innovative moves landed him a spot at the world-renowned Julliard School. After graduation, Parks moved to Hollywood and joined the Millennium Dance Complex staff, where he teaches his moves to students, aspiring backup dancers and celebrities alike.



Gia Balbina

Gia Balbina born January 1, 1990 is a dancer from San Francisco, California. Since she was a little girl, Balbina has danced everywhere from local talent shows to national dance competitions. After years of hard work and numerous auditions, Balbina was invited to join the Mark Morris Dance Group in 2012. 3 years later, Balbina has decided to take her talents on tour with a show that captivates audiences through the innovative use of contemporary dance.



Damien Temple

Damien Temple, born August 8, 1987 is a dancer from Atlanta, Georgia. Temple was not always interested in dance. However, as part of his Sports Science degree at Rowan University, he was required to teach an aerobics class and loved it so much that he decided to minor in Theater/Dance. After graduating, Temple moved to Los Angeles where he worked as a choreographer, dancer and personal trainer. Temple uses his knowledge of exercise science as well as his love for dance to choreograph workouts that are fun and engaging while providing excellent fitness results.

Appendix C

Celebrity Tweets

Low self-disclosure tweets

 **Bindy Moore**
@bindymoore

First episode of Battle of the Comedians
airs after Thanksgiving! Tune in to see who
I picked to be on my team and vote for
your favorite!

 Reply  Retweet  Favorite  More

10/4/15, 3:26 PM · Embed this Tweet

 **Chantel Forrester**
@chantelforrester

Excited to announce that I'll be touring
select US cities in 2016. If you haven't yet,
go to ticketmaster.com to get your tickets
now

 Reply  Retweet  Favorite  More

10/3/15, 2:19 PM · Embed this Tweet

 **Damien Temple**
@damientemple

Stop by Target this weekend and grab a
copy of my new DVD "Cardio Dancin' with
Damien." Use the code Temple10 to get
10% off at checkout.

 Reply  Retweet  Favorite  More

10/9/15, 9:22 AM · Embed this Tweet



Dan Asher
@danasher



Cause and Effect Season 1 is now available for streaming on Hulu. Enjoy 20 episodes of drama television like you've never seen it before.

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

10/5/15, 6:35 PM · Embed this Tweet



Gia Balbina
@giabalbina



Tonight is the first stop on our Just Dance tour. Go to JustDanceLive.com to see if we are coming to a city near you!

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

9/30/15, 5:56 AM · Embed this Tweet



Johanna Morton
@johannamorton



Don't forget to tune into Comedy Central tonight at 9/8c to catch an all-new episode of my comedy mini-series "The Real Johanna Morton"

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

10/4/15, 4:24 PM · Embed this Tweet



Kenton Parks
@kentonparks



Backup Dancer Boot Camp is coming to a city near you. Sign up for a class now at bdbc.com to see if you've got what it takes!

← Reply ↻ Retweet ★ Favorite ⋮ More

9/30/15, 6:22 PM · Embed this Tweet



Oscar Guilterio
@oscarguilterio



Grab a copy of this month's Rolling Stone magazine to see my exclusive interview and find out how to pre-order my upcoming album "DNCE BTZ"

← Reply ↻ Retweet ★ Favorite ⋮ More

10/1/15, 10:12 AM · Embed this Tweet



Rina Wen
@rinawen



My new movie Lost in Translation will be out in select theaters on Christmas Eve. Go to fandango.com to see where it's playing!

← Reply ↻ Retweet ★ Favorite ⋮ More

10/6/15, 8:12 AM · Embed this Tweet



Ronda Raine
@rondaraine



Change your channel right now to CBS!!
An all-new episode of Three's a Crowd just started and you don't want to miss it!

← Reply ↻ Retweet ★ Favorite ⋮ More

10/6/15, 7:01 PM · Embed this Tweet



Ted Ford
@tedford



The first single from my self-titled album is out now and available worldwide. Go to the iTunes store to download Boots and Dukes for free!

← Reply ↻ Retweet ★ Favorite ⋮ More

10/5/15, 7:45 AM · Embed this Tweet



Vince Goodwin
@vincegoodwin



Tickets for my first stand-up comedy tour are now on sale. Go to thevinnygoodshow.com to check out the schedule and buy yours today!

← Reply ↻ Retweet ★ Favorite ⋮ More

10/3/15, 3:22 PM · Embed this Tweet

Moderate self-disclosure tweets



Bindy Moore
@bindymoore



Starting my day with a quick run. I love running because it gives me time to clear my head and think about all the things I'm thankful for.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/2/15, 6:45 AM · Embed this Tweet



Chantel Forrester
@chantelforrester



When I have some spare time, you can find me playing cards with my brothers and sisters. I'm determined to beat them at Go Fish one day!!!

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/1/15, 4:08 PM · Embed this Tweet



Damien Temple
@damientemple



Downtown by Macklemore and Ryan Lewis is slowly becoming my new favorite song. I've already listened to it 5 times today, it's so catchy!

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/1/15, 12:51 PM · Embed this Tweet



Dan Asher
@danasher



Last night I finally got the chance to sit down and play NBA2K16. I play a lot of sports games on my PS4 but this has to be my new favorite.

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

10/2/15, 8:15 AM · Embed this Tweet



Gia Balbina
@giabalbina



Just heard that my all-time favorite book To Kill A Mockingbird is getting remade into a movie. I cannot wait to go see it in the theater!!

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

10/8/15, 3:26 PM · Embed this Tweet



Johanna Morton
@johannamorton



My idea of a perfect birthday includes Justin Timberlake and Jimmy Fallon performing the next edition of History of Rap in my living room

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

10/9/15, 9:31 AM · Embed this Tweet



Kenton Parks
@kentonparks



It's movie night at the Parks' household and since it's my turn to pick, we are watching one of my favorite horror films.... Halloween!!

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

10/5/15, 8:32 PM · Embed this Tweet



Oscar Guilterio
@oscarguilterio



If I could only eat at one restaurant for the rest of my life, I'd pick Shake Shack. Hands down the best burger and fries I've ever tasted

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

10/7/15, 12:21 PM · Embed this Tweet



Rina Wen
@rinawen



Only 2 more weeks until my much needed vacation to Costa Rica. I love to surf so hopefully the waves are good over there this time of year!

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

9/30/15, 6:57 PM · Embed this Tweet



Ronda Raine
@rondaraine



Out of all the seasons, fall is my favorite. This weekend I plan on carving pumpkins and baking some pies to celebrate the beautiful weather

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/2/15, 6:19 AM · Embed this Tweet



Ted Ford
@tedford



Finally moved into an apartment that will allow me to have a small pet. Now I can buy that Corgi I've always wanted!!

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/1/15, 5:35 PM · Embed this Tweet



Vince Goodwin
@vincegoodwin



This weekend is going to be spent lying in bed and binge watching Friends on Netflix, and I couldn't be happier about it.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/10/15, 6:53 AM · Embed this Tweet

High self-disclosure tweets



Bindy Moore
@bindymoore



Growing up, I used humor as a defense mechanism and it became a habit. Now I worry that I'll never be able to express other types of emotion.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

9/30/15, 7:35 PM · Embed this Tweet



Chantel Forrester
@chantelforrester



My mom was diagnosed with bipolar disorder when she was 25 and the closer I get to that age, the more I worry that I will end up with it too

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/5/15, 9:09 PM · Embed this Tweet



Damien Temple
@damientemple



Just found out my wife is pregnant and although I am super excited, I am also terrified that I am going to be a terrible father.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/5/15, 4:12 PM · Embed this Tweet



Dan Asher
@danasher



6 months ago, I was treated for depression. Though I am doing much better now, there are some days where getting out of bed is just hard.

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

9/29/15, 11:15 AM · Embed this Tweet



Gia Balbina
@giabalbina



I struggled with an eating disorder for 5 years before I finally realized starving wouldn't make me a better dancer but getting help could.

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

9/30/15, 11:19 PM · Embed this Tweet



Johanna Morton
@johannamorton



My parents couldn't afford to get me braces so instead of being self conscious about my teeth, I just learned how to smile with my mouth closed.

[← Reply](#) [↻ Retweet](#) [★ Favorite](#) [⋮ More](#)

10/5/15, 9:46 PM · Embed this Tweet



Kenton Parks
@kentonparks



I hear my girlfriend and her friends talk about how attractive they find other guys and sometimes I wonder if she feels the same way about me.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/8/15, 2:32 AM · Embed this Tweet



Oscar Guilterio
@oscarguilterio



I know it's not my fault that I was born into an upper class family and I shouldn't feel guilty when they offer me money, but I do.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/6/15, 7:35 PM · Embed this Tweet



Rina Wen
@rinawen



I was never insecure about my body image until I moved to LA and everyone around me was tall and skinny with blond hair and large breasts.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/1/15, 11:12 PM · Embed this Tweet



Ronda Raine
@rondaraine



I haven't cried in a while but when you find out your best friend has been secretly dating your ex for over a year, you can't really help it

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/2/15, 4:31 PM · Embed this Tweet



Ted Ford
@tedford



When I was 18, I had a bad car wreck that left me with a broken neck and 2 deceased best friends. Not a day goes by that I don't miss them.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/10/15, 3:41 PM · Embed this Tweet



Vince Goodwin
@vincegoodwin



When I go out with my friends, I'm always "the funny guy." Sometimes I wonder what it would be like to be viewed as "the hot guy" for once.

[Reply](#) [Retweet](#) [Favorite](#) [More](#)

10/9/15, 7:56 PM · Embed this Tweet