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# The Anonymous Network: Perceptions of Social Capital and Well-being Among College Students on Yik Yak

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THE ANONYMOUS NETWORK: PERCEPTIONS OF SOCIAL  
CAPITAL AND WELL-BEING AMONG COLLEGE  
STUDENTS ON YIK YAK

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A Thesis  
Presented to  
the Graduate School of  
Clemson University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
Communication, Technology and Society

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by  
Cathlin V. Clark  
May 2016

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Accepted by:  
Joseph Mazer, Committee Chair  
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## ABSTRACT

This study examines the relationship between the use of the smartphone application Yik Yak, psychological well-being, and the formation of social capital. Yik Yak is a social media smartphone application that affords users pseudo-anonymity to create and view discussion threads within a five mile radius. Pearson correlations conducted on results from a survey of undergraduate students ( $N = 255$ ) revealed a significant relationship between Yak intensity scores, a measure that combines the variables of frequency and duration, and bridging social capital, which are resources based on group membership, relationships, networks of influence, and support derived from engaging with weak ties and diverse people. Although the correlations between Yik Yak and bonding social capital and the measures of well-being were not significant, future research on the application can focus on measures encapsulating the perceived anonymity and self-presentation associated with the app.

## DEDICATION

For Dad – no one fights alone.

## ACKNOWLEDGMENTS

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## CHAPTER ONE

### INTRODUCTION

In recent years, the anonymous nature of the Internet has come to the forefront of social and political debate and revolution (Jurgenson, 2012). The broad phenomenon of anonymity online is something that scholars seek to gain a more solidified understanding of (Blodgett & Tapia, 2010; Hickerson & Perotti, 2013; Whitty & Gavin, 2001). A contributing factor in the rise of anonymous online communication is the smartphone, which is being used for a multitude of reasons by anonymous parties, such as grassroots organizing and other, underground protest efforts (Monterde & Postill, 2013; Robison & Goodman, 1996).

We know little about how individuals utilize the smartphone application Yik Yak because of its anonymous nature. This study seeks to gain a greater understanding of undergraduate students' experience with Yik Yak, and how the use of the smartphone application may have an effect on their self-esteem, satisfaction with life, and perceived social capital. The setting and participants are appropriate for this study because Yik Yak is location-based, and is designed for use in a University setting. The anonymous platform of Yik Yak is an interesting subject to study because students self-disclose numerous things on Yik Yak as a result of its anonymous nature, ranging from humorous anecdotes, to sexual deviances, to derogatory and abusive language towards other students and professors alike (Mahler, 2015). It is a platform to express whatever thoughts or feelings a student may have in a campus community, but can be used in a negative fashion. It is unique because it is designed for use around college campuses, as

well as high schools in some instances, providing users with the ability to “peek” at the activity of other schools and universities. This study is significant because it could be used to observe the campus climate and be a key to understanding how student use of Yik Yak affects their perceptions of themselves and their lives on a university campus.

A phenomenon that may be illustrated in the analysis of this study is the construct of social capital and how it affects interactions of students on social media. Specifically, this study is interested in understanding how students perceive their experiences with Yik Yak, and if perhaps the anonymous environment of the smartphone application mediates self-disclosure and perceived bridging of social capital among students. To operationalize the components of this study, each of the variables and aspects of the study will be discussed to set a foundation from which the study is built.

### **Yik Yak in the Press**

In recent times, Yik Yak has been the subject of media attention, and has received relatively negative press with stories of the app surfacing as being used as an avenue for cyber bullying, bomb threats, and suicide notes (Russon, 2014). Select parents, scholastic officials, and even users themselves expressed various concerns regarding incidents of cyberbullying, sexually explicit commentary, hate speech, and other forms of harassment. For example, a bomb threat posted on the app caused a campus lockdown at San Clemente High School in California (Flores, 2014). One case of extreme abuse occurred on the University of Mary Washington's Yik Yak feed (Kingkade, 2015). Grace Rebecca Mann, a member of the campus's chapter of the Feminist Majority Foundation, openly spoke against campus Greek life and a sexist chant used by the rugby club. Mann's ideas

were mocked and challenged, resulting in cyberbullying and threats on Yik Yak. One extreme example of a Yak read, “Gonna tie these feminists to the radiator and grape them in the mouth” (Kingkade, 2015). Despite the UMW’s Feminist Majority Foundation’s complaints to school officials, nothing was done about the cyberbullying. According to Kingkade (2015), the issue persisted from November of 2014 to April of 2015. On April 17, 2015, Mann was murdered by strangulation (Dewan & Stolberg, 2015). While much of the criticism in Mann’s case is about the failure of the school’s administration to take action, some argue that Yik Yak continually fueled the quarrel (Tovey, 2015).

Despite the negative interpretations of the anonymous app presented by the media, that is not what the founders and developers of the app had originally intended its purpose to be, and is not what it is primarily used for. The founders said, in a March 2014 International Business Times UK article, the app was meant to act as a “nonjudgmental, real-time bulletin board.” The app is supposed to act as a valuable and resourceful outlet of information, in addition to creating a sense of collective discussion and ideas, according to Yik Yak co-founder Brooks Buffington in an interview with IBTimes UK. He says: “We wanted to enable people to be really connected with the people around you, even if you don’t know them. It’s like a virtual bulletin board, a hyper-local version of Twitter where people can use it to post information and everyone in the area can see it” (n.p.).

On a similarly positive note, students at College of William and Mary claim that Yik Yak has potential benefits, claiming it serves as an anonymous avenue that students can use to reach out for help (Shahani, 2015). In one instance a student posted, "I want to

turn my emotions off. There's very little left for me to be happy about and it's only a matter of time before those things fade too," to the College of William and Mary feed. Fellow app users responded and expressed love and support, encouraging the poster to seek out a mental health professional. Stories like this indicate that the app can also be a positive tool for students.

The popular media frames Yik Yak almost exclusively as a platform for inciting violence and threats, and previous studies have framed it as worsening cyberbullying problems, but this paper seeks to understand how students really use the app and how it affects their daily lives as a university student.

### **Definitions**

**Yik Yak.** Most colleges and universities have Yik Yak boundaries that students utilize while attending the school. Colleges and universities, however, have no control over what is posted in the application unless they attempt to block it from being used altogether. In September 2014, the president of Norwich University banned the app from being used via the school's computer and internet system as a symbolic move against the app, as students could still access it through other avenues (Ring, 2014). The developers of the app have already done this location-based blocking at high schools around the country, where cell phone use is already banned and cyberbullying is more prominent. The app developers describe Yik Yak as an anonymous Twitter-like mobile application for smartphones that organizes posts based on location. Unlike Twitter, Yik Yak does not have a web browser-based sister site; it is solely used by smartphone owners. Because the app is anonymous, and users are not required to create accounts with any personally

identifying information, the only piece of information that is shared is the location from which something was posted. However, according to the Privacy Policy of Yik Yak, such information is collected by the developers, providing the opportunity to compromise anonymity. Information such as the ID of the device used to access the app, the IP address, and “other unique identifier(s)” can be collected (Privacy, n.d.). Yik Yak’s privacy policy states, “We may disclose the information we collect from you to third party vendors, service providers, contractors or agents who perform functions on our behalf” (Privacy, n.d.). Not much scholarly research has been done in the way of this specific smartphone application, further justifying the need for research.

**Intensity.** Intensity is often considered a combination of the time spent using a specific social media platform taken under consideration in tandem with other indicators of use that are specific to that platform, such as the number of Facebook ‘friends’ or Twitter ‘followers.’ The variable of intensity was developed by Ellison, Steinfield, and Lampe (2007) as an alternative way to measure how much one uses a social media application, compared to the traditionally used measures of frequency or duration. Frequency would measure how often a site or app was used, and duration would measure the amount of time spent using the media. Intensity, instead, looks at those variables in addition to the number of ‘friends’ or ‘followers’ a user has. A user who spends a larger amount of time with a larger amount of connections would therefore be using a platform with a higher amount of intensity.

**Self-Esteem.** Self-esteem is defined as a feeling of self-worth (Rosenberg, 1989). Self-esteem is also seen as the degree to which the qualities contained in our self-concept

are seen to be positive. Smith, Mackie, and Claypool (2015) define self-esteem as falling under the greater umbrella of self-concept, asserting that “the self-concept is what we think about the self; self-esteem, is [then] the positive or negative evaluations of the self, as in how we feel about it” (p. 96).

Self-esteem reflects a person's image of themselves and their accomplishments, and low self-esteem is often seen in depressive disorders (Smith, Mackie, & Claypool, 2015). Self-concept refers to the conception and evaluation of oneself that includes physical and psychological skills and qualities, which make us who we are (Smith, Mackie, & Claypool, 2015). Self-esteem is related to one's satisfaction with life in a given situation, such as while attending college, as is the case with this study.

**Life Satisfaction.** Life satisfaction is an overall assessment of feelings and attitudes about one's life at a particular point in time ranging from negative to positive. It is one of three major indicators of well-being: life satisfaction, positive affect, and negative affect (Diener, 1984). Although satisfaction with current life circumstances is often assessed in research studies, Diener, Suh, Lucas, and Smith (1999) also include the following under life satisfaction: desire to change one's life; satisfaction with past; satisfaction with future; and significant other's views of one's life.

**Social Capital.** The concept of social capital extends from Marxist Pierre Bourdieu's theory of cultural capital. Cultural capital is forms of knowledge, skills, education, and advantages that a person has, which give them a higher status in society. Parents provide their children with cultural capital by transmitting the attitudes and knowledge needed to succeed in the current educational system (Bourdieu, 1986). Social

capital extends from the concept of cultural capital, and refers to resources based on group membership, relationships, networks of influence, and support. Bourdieu described social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (Bourdieu, 1986, p. 88). These forms of capital, according to Bourdieu, differ from traditional, economic capital, which can simply be seen as the command over economic resources such as cash currency and assets. Putnam (2002) advanced the concepts of “bonding social capital,” which is associated with one’s established social network, and “bridging social capital,” which is derived from engaging with other, diverse people (p. 22). Ellison, Steinfield, and Lampe (2007) measured both the bridging and bonding of social capital, as well as the concept of “maintained” social capital, which refers to the specific context of college students, and how they maintain relationships from their hometowns after moving to a presumably new geographical area for college. While ‘maintained’ social capital is not a necessary or measurable variable suited for the anonymous nature of Yik Yak, the variables of bonding and bridging social capital can be readily applied.

### **Direction of Research**

There is an obvious gap between what the media portrays Yik Yak as and what the founders of the app intended it to be. Because little scholarly research has been done on the app, it is important to look further into how students are really using the app and how it is affecting their lives – and whether or not that falls closer to the app's original purpose or to the opinion touted by popular media. By looking into the intensity of which

the app is used in a collegiate setting, and identifying whether or not that relates to satisfaction with life at the university and the concept of social capital, we can gain a better understanding of the app and the place it holds in the day to day lives of the people who actually use it, not just those who write about it. Because of this juxtaposition of the information readily available to the public, this study asks:

RQ: What is the relationship among Yik Yak intensity, social capital, and satisfaction with life at a university?

## CHAPTER TWO

### REVIEW OF LITERATURE

The technology of the telephone takes roots in Samuel Morse's 1837 invention of the telegram and Morse code. Alexander Graham Bell was, however, the first to patent the telephone, as an "apparatus for transmitting vocal or other sounds telegraphically" (Lacohee, Wakeford, & Pearson, 2003, p. 203). Bell has most often been credited as the inventor of the first practical telephone with his 1876 U.S. patent, although there are several other inventors that contributed knowledge and inventions to its development.

According to Lacohee, Wakeford, and Pearson (2003) "commercial *mobile* telephony began in the USA in 1947 when AT&T began operating a 'highway service' offering a radio-telephone service between New York and Boston" (p. 204). By year 1979, the first commercial cellular phone system started in Tokyo, and by the mid-1980s there was "a significant expansion of services offered to the general public that rapidly attracted large numbers of subscribers wherever services were available" (Lacohee, Wakeford, & Pearson, 2003, p. 205).

The first of what we call 'smartphones' today was sold on the market starting in 1994 – the IBM Simon Personal Communicator. The phone weighed 1.1 pounds with an hour's worth of battery life, and featured a green and black LCD screen that users could use a stylus to engage with a calendar, send emails, and make phone calls (BBC News, 2014). The phone was also the first of its kind to have a software application on it – one that could be used to connect the phone to a fax machine. While we have come a long way in mobile technology, the basic idea for a smartphone can still be seen in devices we

use today, however the software applications installed on the devices are much further reaching than just connecting to a fax machine.

Social media, with origins on the Internet that were later transcribed into phone applications, has developed in the last decade as well. Social media took its roots with the launch of Geocities in 1995, a site that placed content based on location (e.g., entertainment articles in Hollywood). Later, the concept of social media picked up with sites like MySpace launching in 2003, Facebook in 2004, and Twitter in 2006 (A Short History Of Social Media, n.d.). In 2009, development of apps for smartphones began to take off, specifically with social media creators designing applications to be used on smartphones for ease of use. By 2010, the word ‘app’ was added to the dictionary and voted ‘word of the year’ by the American Dialect Society (American Dialect Society, n.d.). It is at this convergence of telephony, mobility, and social media that we can begin to understand the role of the combined technology in this study and its position in the technological history.

**Smart Phones and Social Media.** At the convergence of the Internet-connected phone, participatory media, and user-generated content, the social networking site and their coordinating applications for the smart phone are born. Although SNSs did come before smartphones, as a result of their ubiquity in society, the definition of an SNS has evolved (Ellison & boyd, 2013). According to Ellison and boyd (2013) “a social network site is a networked communication platform in which participants 1) have uniquely identifiable profiles that consist of user-supplied content, content provided by other users, and/or system-level data; 2) can publicly articulate connections that can be viewed and

traversed by others; and 3) can consume, produce, and/or interact with streams of user-generated content provided by their connections on the site” (p. 158).

In a recent survey sponsored by National Public Radio, it was found that young adults are often dismayed by the rude usage of smartphones by their peers, the majority of the respondents saying that people who check their smartphones while socializing is disrespectful (Hu, 2014).

In 2012, 80 percent of all phones sold were smartphones; the amount of time Americans spent online nearly doubled from December 2010 to December 2011; and total time online by smartphone users increased 237% (Yarow, 2014). Smartphone-enabled social networking sites, according to the market research firm Nielson, are so popular that 63% of Americans access them (Columbus, 2013; IDC, 2013; Weber, 2013). The use of mobile applications on smartphones is rapidly growing as well (Gardner, 2014). On average, the normal smartphone user launches 10-16 applications per day. “Super Users” launch 16 or more per day while “Mobile Addicts” execute over 60 applications each day (Khalaf, 2014, para. 5).

**Anonymity on Social Media.** Anonymity “is the degree to which a communicator perceives the message source as unknown or unspecified” (Scott, 1998, p. 382). Anonymity online has a rich history, and an even more complex history before the birth of the Internet. While chatting anonymously online with others has its innocent origins in virtual games of chess and bulletin boards, it has now become a tactic employed by ‘hacktivism’ groups such as Anonymous. Increasing awareness of privacy issues and events such as the Edward Snowden disclosures, which unveiled secret global

surveillance documents, and Wikileaks founder Julian Assange, who also published secret documents and classified information, have led to the rapid growth of a new generation of anonymous social networks and messaging applications. By removing traditional concepts of strong identities and social links, these services encourage communication between strangers, and allow users to express themselves without fear of bullying or retaliation (Wang et al., 2014). Wang et al. (2014) examined of the anonymous confession website *Whisper*, seeking to understand how anonymity and the lack of social links affect user behavior – a phenomenon that has its place on Yik Yak as well. Many anonymous confession websites such as Whisper and Collegefession are gaining popularity, particularly among young adults. Yik Yak, while not touted as a confession application, still enables users to voice opinions anonymously without the fear of real-world repercussions, and has been used for that purpose.

Crawford (2009) argues that too much research on social media in the past has focused on having a voice, but neglects the fact that there are always listeners when someone is exercising his or her voice online. Crawford creates a metaphor for listening online to mean paying attention to things online, and analyzes Twitter through three modes of online listening: background listening, reciprocal listening, and delegated listening. Crawford (2009) then conducted a case study of how these modes of listening are performed by individuals, politicians, and corporations. Being aware of who is ‘listening’ online makes anonymous-enable websites and applications seem much more appealing to users.

**Yik Yak Uses and Gratifications.** While little scholarly research has been published that pertains specifically to the app, in a recent study Yik Yak was identified as a venue for college-aged cyberbullying (Whittaker & Kowalski, 2015). Northcut (2015) conducted a quantitative study on Yik Yak that explored the percentage of Yaks that are location dependent (i.e. carry meaning that is location specific) and the rhetorical purpose of yaks at a single Midwest university. Northcut (2015) found that over one third of Yaks were location dependent and that Yaks fell into the categories of shock, joke, inquire, and remote. Because there are two emerging lines of research regarding the app, it is important to consider what uses and gratifications users may seek to use the application for. Blumler and Katz (1974) suggest that media users play an active role in choosing and using media, which in this case, could be considered Yik Yak. According to uses and gratifications theory, users take an active part in the communication process and are goal-oriented in their media use; they seek out a media source that best fulfills their needs (Blumler & Katz, 1974). Ruggiero (2000) argues that with each new wave of technology, such as newspapers, television, and the Internet, uses and gratifications theory has been revitalized, contrary to others that argue the theory is not rigorous or social scientific. While this study does not directly pull from uses and gratifications theory, it recognizes the importance of understanding the motivations for why user choose their media, and that there could be a revitalization of the theory with the generation of the smartphone and apps upon us.

## **Psychology and the Internet**

The psychology of human interaction via computer-mediated communication has been studied in varying social scientific traditions, ranging from psychology and sociology to communication studies. Subjective well-being (SWB) is a field of psychology that attempts to understand people's evaluations of their lives (Diener, Suh, & Oishi, 1997). By understanding the habits of users of social media and their own assessment of their well-being, we can begin to further grasp how these technologies are fitting into the lives of people. It is at this intersection of psychology and communication that studies emerge relating to the effects of communication via social media (Bargh et al., 2002; Tidwell & Walther, 2002). Bargh, McKenna, and Fitzsimons (2002) found that certain social networking sites decrease barriers to communication, which then promotes greater self-disclosure. In an experiment involving undergraduate students who were randomly assigned conversation partners in an online setting and in a face-to-face setting, those who were communicating online were better able to express their 'true-self' qualities (Bargh et al., 2002). Tidwell and Walther (2002) also studied the effects that computer-mediated communication has on self-disclosure, impressions, and interpersonal evaluations, finding that participants who communicated via computer had a higher proportion of intimate and direct uncertainty reduction behaviors than those participants who met in a face-to-face interaction.

**Self-Esteem and Life Satisfaction.** According to Rosenberg (1989), trait self-esteem is reflected in people's agreement or disagreement to statements such as "I feel I'm a person of worth," or "On the whole, I am satisfied with myself" (p. 1005).

However, state self-esteem changes in the moment, and can be attributed to people agreeing on statements such as “I feel pleased with my appearance right now,” or “I feel as smart as others” (Heatherton & Polivy, 1991, pp. 898-899). Trait self-esteem is more stable, while state self-esteem can vary. Therefore, when looking at one’s satisfaction with life as a whole, it is important to consider trait self-esteem as a complimentary indicator, as life satisfaction does not consider one’s current feelings. According to Gilman and Huebner (2003), life satisfaction is an important construct in positive psychology, and can be viewed as the way a person evaluates his or her life. Life satisfaction is determined by looking at items such as mood, satisfaction with relations with others, and achieved goals, self-concepts, and self-perceived ability to cope with daily life (Gilman & Huebner, 2003). Life satisfaction has studied in a variety of contexts, including its relation to education, economic standing, and life experiences and place of residence (Ernst, Kossek, & Ozeki, 1998; Gilman & Huebner, 2003).

Studies have also predicted that individuals who feel more comfortable with online disclosure are more likely to bring those virtual relationships into their ‘real’ lives after bonding online (McKenna, Green, & Gleason, 2002). Because certain individuals are more likely to self-disclose in these online environments, it is important to explore the connection of constructs of subjective well-being to online disclosure, particularly in an anonymous environment like Yik Yak.

### **Cultural and Social Capital**

A phenomenon that can be seen in a stream of research is the construct of social capital and how it is accrued through interactions of students on social media. The

concept of cultural capital involves culturally defined assets, such as knowledge, education, and skills. These assets may afford individuals greater social status within a particular culture, and may be correlated with an individual's economic standing, but are not necessarily related (Bourdieu, 1986). According to Bourdieu (1986), cultural capital may be gained through social capital, because resources are accumulated by making ongoing network connections in a social environment. Coleman (1988) builds on Bourdieu's concept from a sociological standpoint and adds three new facets of social capital, including obligations and expectations, information channels, and social norms. He applies this concept to high school sophomores who drop out due to the inability to access social capital in their teenage years. Broadly, Coleman (1988) defines social capital as the resources that are accumulated through relationships with people. Bourdieu and Wacquant (1992) define social capital as "the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (p. 14). Adler and Kwon (2002), pulling from work conducted in political science, sociology, and economics, combined the theoretical research that had been done thus far in various fields and developed a conceptual framework that identified the sources, benefits, risks, and contingencies of social capital that would be applicable to all disciplines. Putnam (2001) argues that American society's use of social capital as a resource is declining. Decades ago, Americans built social capital as a side effect of participation in civic organizations and social activities, including bowling leagues, but today, they do so far less frequently (Putnam, 2001). Resnick (2001) argues that researchers need to find new opportunities

for people to interact, specifically online and through computer-mediated formats, that will generate even more social capital than ‘bowling together’.

**Social Capital SNS Studies.** All definitions of social capital are derived from having a network of friends, acquaintances, and colleagues. The same principle – having an interconnected network of people – is present on social networking sites (SNSs). Studies have been conducted to seek a better understanding of how the concept of social capital applies to networks online (Bargh & McKenna, 2004; Donath & Boyd, 2004; Nie, 2001; Quan-Haase & Wellman, 2004).

Nie (2001) argues that Internet use reduces interpersonal interaction and communication and may result in the decline of social capital resources. However, other, more recent studies have found that the relative anonymity afforded to users and the provision of venues in which to meet others with similar interests and values has been beneficial to forming new relationships (Bargh & McKenna, 2004). Bargh and McKenna (2004) also found that the positive effects of the Internet on subjective well-being and other factors are largely dependent on the particular goals that users have in seeking mediated interactions, like self-expression, affiliation, or competition. Donath and boyd (2004) further explore the purpose and effects of the public display of one’s social network online, and argue that people are accustomed to thinking of the online world as a social space. SNSs play on the fact that knowing that people are more likely to connect to another person if they have a mutual friend – a friend that is already known and trusted is one of the most basic ways of establishing trust with a new relationship (Donath & boyd, 2004). Quan-Haase and Wellman (2004) conceptualize the Internet’s relationship to

social capital in three different ways: the Internet can transform, diminish, or supplement social capital. Quan-Haase and Wellman (2004) then go on to argue that Putnam's (2001) argument that Americans participation in civic engagements is declining is not so much the case, but rather the participation is being displaced to an easier to access network – the communities embedded in digital networks that are accessible from the comforts of home.

**Bridging and Bonding Social Capital.** This displacement of social capital into the realm of the Internet means that there is more than one way to access the resources of a social network, and can be attained through both the bridging and bonding of social capital. Putnam (2002) advanced the concepts of “bonding social capital,” which is associated with one's established social network, and “bridging social capital,” which is derived from engaging with other, diverse people (p. 22). Ellison et al. (2007) found individuals utilize social networking sites (SNS) to approach both the bonding and bridging of social capital. McEwan and Sobre-Denton (2011) argue that individuals might access bridging social capital via culturally diverse virtual spaces, specifically looking at how virtual cosmopolitanism can be constructed through the transfer of social and cultural capital in virtual spaces, and that said virtual spaces could play a part in constructing virtual third cultures. Drawing on the two and a half year ethnography of Sobre-Denton in the INTASU (INT-ernational Arizona State University) Yahoo! page, McEwan and Sobre-Denton argue that INTASU transcends traditional cultural boundaries physically and psychologically; members reside in multiple countries and maintain contact through virtual space (2011). Members from over 25 countries

participate in the Yahoo! page, and it “becomes a virtual space to plan activities, engage in gossip, post photos, and connect with local members as well as those outside the United States” (McEwan & Sobre-Denton, 2011, p. 255).

A number of studies have looked specifically at the SNS Facebook and assessed its potential for both informational and social support, which support different aspects of social capital, through surveys, interviews, and server-level data (Ellison et al., 2014; Ellison et al., 2011; Ellison et al., 2007; Ellison & Vitak, 2015; Steinfield et al., 2008; Vitak & Ellison, 2012).

Ellison et al. (2007) found that among undergraduate students using Facebook, bridging social capital was the highest amount of perceived capital, and that the SNS may hold greater benefits for those suffering from low self-esteem. Steinfield et al. (2008) confirmed those findings in a longitudinal study, reporting that those with lower self-esteem gained more from their use of Facebook in terms of bridging social capital than higher self-esteem participants. They suggest that “Facebook affordances help reduce barriers that lower self-esteem students might experience in forming the kinds of large, heterogeneous networks that are sources of bridging social capital” (Steinfield et al., 2008, p. 434).

SNSs, such as Facebook, make social resources more available because they enable information seeking behaviors (Ellison et al., 2011). Ellison et al. (2007) found that SNSs lower barriers for communication with both strong (close friends and family) and weak (friends of friends, or acquaintances) ties. Donath and boyd (2004) noted the ability of SNSs to expand weak tie networks, therefore increasing the amount of

acquaintances one has, which is related to bridging social capital. Bonding social capital, which is associated with strong ties, is generally found through closer family and friends, except in the instances when users of SNSs are seeking requests for emotional support (Vitak & Ellison, 2012). Vitak and Ellison (2012) also found that as users' networks increased in size and diversity (i.e., number of unique social groups identified in their network) so did the perceived bridging of social capital, partially due to the expansion of access to novel information and differing worldviews. Ellison et al. (2014) then found that those who make mobilization requests on Facebook, by asking for help or expressing anger/sadness, are more likely to try to respond to others' expressed needs, and tend to see the site as a better source of information, coordination, and networked communication, as well as reported higher amounts of social capital.

Research has shown that SNSs are positively associated with the perceived access to and accrual of a variety of social capital resources, including broadening weak tie networks, related to bridging social capital, and seeking informational and social support, which is related to bonding social capital (Ellison & Vitak, 2015). Most recently, Ellison and Vitak (2015) posited that factors that are specifically important to consider in future research on social capital and SNSs are "users' interaction patterns and network composition" (p. 214).

**Social Capital Among College Students.** Previous literature has studied how college students utilize social media to adjust to life changes as freshman (DeAndre et al., 2011; Gray et al., 2013; Wohn et al., 2013). DeAndre et al. (2011) studied a student-centered social media site designed to enhance students' perceptions of social support

prior to their arrival on campus, finding that as a result of using the site, students' perceptions that they would have a diverse social support network during their first semester at college increased. Gray et al. (2013) developed a model to test both traditional and Facebook-oriented indicators of social support and social adjustment of college freshman, finding positive relationships between the number of Facebook friends students have at the college and their engagement in collaborative behaviors with classmates through the site, as well as a positive relationship between social adjustment and persistence at the university. Wohn et al. (2013) found that first-generation college students are more likely to benefit from social media use than second- or third-generation college students. For students whose parents did not graduate from college, finding information about higher education through social networking sites was associated with higher levels of efficacy about college application procedures, as well as having access to a broader network of people who could actively answer questions and provide informational support was positively related to first-generation students' expectations about their ability to be successful in college.

**Social Capital, Well-Being, and Yik Yak.** Yik Yak does not fit the most recent definition of a Social Networking Site, as outline by Ellison and boyd (2013) – it differs because it does not have uniquely identifiable profiles, nor does it publicly articulate one's connections. It does, however, meet the third criterion of displaying streams of user-generated content, as well as, have inferred connections as being those who are located on a college campus, and provides profile images in the form of clipart of objects

(such as socks, lanterns, etc.) to make it easier to address other anonymous users by calling them by the name of their profile image.

Ellison and Vitak (2015) recommend focusing on users' interaction patterns and network composition in future research. Yik Yak fits the description for this because posting and response patterns can still be studied, and the network composition is completely unique because every college campus provides a different network. Given the recommendation of Ellison and Vitak (2015), taken in tandem with the precedence for studying college undergraduate students in terms of social capital, Yik Yak presents a unique area for future study, and can perhaps serve to fill a gap in the literature for social media applications that do not quite meet the criteria for Ellison and boyd's (2013) definition of a SNS. The literature has demonstrated that undergraduate students frequently rely on SNSs to cope with the transition to college life – a transition which can be both mentally and physically draining. Following in the vein of Steinfield et al. (2008) and Ellison et al. (2007), who studied the self-reported mental health of undergraduate students through measures of subjective well-being, including self-esteem and satisfaction with life and found that those with lower self-esteem found greater benefit to using the SNS Facebook, it can be argued that same concept is applicable to Yik Yak, if not to a higher degree because of the anonymous nature of app, leaving more room for freedom of expression and self-disclosure.

H1: Students who utilize Yik Yak with a greater intensity are more likely to have a lower perceived self-esteem.

H2: Students who utilize Yik Yak with a greater intensity are more likely to report a higher satisfaction with life at the university.

The literature of social capital in SNS studies that have considered Facebook (Ellison et al., 2014; Ellison et al., 2011; Ellison et al., 2007; Ellison & Vitak, 2015; Steinfield et al., 2008; Vitak & Ellison, 2012), identify the site as a place of perceived bonding and bridging social capital among both strong and weak ties. Yik Yak, while an anonymous platform, is still among a known network to students – their college campuses. Therefore, the composition of the network could be of both strong and weak ties to the user of the app, but the composition is unknown to the user at the time of posting, so it is unknown which variety of ties would respond to any mobilization requests, meaning that there may be a higher rate of perceived bonding social capital than on previous SNSs due to the anonymity provided by Yik Yak.

H3: Students' Yik Yak intensity scores will be positively associated with perceived bonding of social capital.

Students may also utilize the app to seek information and meet new people knowing that they are tapping into a network of those with a similar location, therefore seeking the opportunity to form new relationships, or weak ties.

H4: Students' Yik Yak intensity scores will be positively associated with perceived bridging of social capital.

## CHAPTER THREE

### METHOD

This study utilized a survey featuring previously validated measures set on five-point Likert scales to test the hypotheses outlined in Chapter Two. Participants were chosen from a location-specific context, and IRB exempt approval was obtained.

#### **Participants**

Participants were students attending a large Southeastern university that were enrolled in a basic communication course at the time of the study. This population provided a representative sample from the university because it is a general education requirement and has a diverse array of enrolled majors. The total sample for this study included 255 participants, who were both self-reported Yik Yak users ( $N = 131$ ) and non-users ( $N = 124$ ). There were 101 male and 154 female participants. Because the sample was specifically focused on college students, average age was 19.49 ( $SD = 1.78$ ). The sample was 86.61% ( $n = 220$ ) White or Caucasian, 7.09% ( $n = 18$ ) Black or African American, 3.54% ( $n = 9$ ) Asian or Pacific Islander, 1.18% ( $n = 3$ ) Hispanic or Latino, and 1.57% ( $n = 4$ ) of the sample reported 'other' as their ethnicity. The most prevalent year in school for the sample was freshman with 102 participants, with then 86 participants reporting as sophomores, 29 reporting as juniors, 36 reporting as seniors, and 2 reporting other or non-traditional. The majority of the sample reported their home residence as in-state (60%), as well as reporting that they currently live in on-campus housing (60.78%). The sample largely was not involved in Greek life, with only 33.73%

reporting that they were a member of a fraternity or sorority. As a whole, the participants reported they spent an average of 5.41 hours per day on the Internet ( $SD = 6.02$ ).

### **Procedure**

The goal of the study was to test the hypotheses outlined in Chapter Two, as well as gain a better understanding of how college students utilize Yik Yak. An IRB application was submitted to gain permission to work with human subjects in the university setting. This project was considered at the ‘exempt’ level of IRB approval, as no mental or physical harm came to participants because of their involvement in the study. All student participation was anonymous and confidential.

This study used an online survey to test the hypotheses. An online survey was chosen over a face-to-face survey because it dismissed any opportunities for bias on behalf of participants upon observing the researcher, as well as provided a more convenient platform for participants to take the survey in their own free time. As mentioned before, the participants were enrolled in a basic communication course at the time of the study, which is a general education requirement at the university they attend. The survey was sent to participants via an email link, and was open for them to take for a two week time period. A follow-up email was sent at the halfway point to remind participants to complete the survey. There was a cover sheet on the survey that includes IRB informed consent, but also specific instructions for the participants. At the end of the survey, the participants were asked to take out their smart phone and open their Yik Yak application. There were questions on the survey that asked participants to self-report their

YakKarma score, so having their phones open will ensure more accurate reporting of the scores.

## **Measurement**

**Intensity.** Intensity measured the amount to which participants are engaged with Yik Yak. The measure includes two self-reported assessments of Yik Yak behavior, which measure the extent to which the participant was actively engaged in Yik Yak activities, including a users' YakKarma score and the amount of time, in minutes, spent in the app per day. The measure is based on a Facebook intensity scale utilized by Ellison et al. (2007) and Steinfield et al. (2008). Ellison et al. (2007) reported Cronbach's alpha = .83 in using this scale within the context of study utilizing social networking site Facebook. Items asking specifically about intensity include questions such as, "In the past week, on average, approximately how many minutes per day have you spent on Facebook?" Answers for these questions were set as fixed intervals, including "0 = less than 10, 1 = 10–30, 2 = 31–60, 3 = 1–2 hours, 4 = 2–3 hours, and 5 = more than 3 hours" (Ellison et al., 2007, p. 1150).

The intensity scale also has a series of Likert-scale attitudinal questions, which are meant to measure how the student was emotionally connected to Yik Yak and the extent to which Yik Yak was integrated into the participants' daily activities (Ellison, Steinfield, & Lampe, 2007). This study found a Chronbach's alpha of .89 for the Likert intensity scales ( $M = 24.38$ ,  $SD = 4.99$ ). Examples of these attitudinal questions include, "I feel I am a part of the Facebook community," and "I would be sorry if Facebook shut

down.” Responses to these questions are on a five-point Likert scale, with responses including ‘Strongly Agree,’ ‘Agree,’ ‘Neutral,’ ‘Disagree,’ and ‘Strongly Disagree.’

**Self-Esteem.** The Rosenberg (1989) self-esteem scale was used as a measure of subjective well-being. It is the most-widely used scale to measure self-esteem in the social sciences (Roy, Smart, & Boden, 1996). Rosenberg (1989) developed the scale for use in surveys and interviews to measure the self-esteem of participants, and has roots in psychological studies. It has been cited as a well-known and validated measure of subjective well-being (Ellison et al., 2007). Studies have also tested the scales effectiveness among undergraduate students in higher education with success (Martín-Albo et al., 2007). Based on the adaptation of this scale by Ellison, Steinfield, and Lampe (2007), self-esteem was measured using seven items from the Rosenberg’s self-esteem scale, with a reported Cronbach’s alpha = .87. For this study, the Chronbach’s alpha for self-esteem was found to be .82 ( $M = 13.07$ ,  $SD = 3.85$ ). Examples of items that were adapted from Ellison et al. (2007) include: “I feel that I’m a person of worth, at least on an equal plane with others” and the reversed question, “I feel I do not have much to be proud of.” These items are also set on a five-point Likert scale with responses including ‘Strongly Agree,’ ‘Agree,’ ‘Neutral,’ ‘Disagree,’ and ‘Strongly Disagree.’

**Life Satisfaction.** Another measure of subjective well-being that has been frequently used and validated is the satisfaction with life scale (SWLS). The scale, also with roots in psychological studies, is recommended for use in tandem with other measures of emotional well-being because of its focus on an individual’s “conscious evaluative judgment of his or her life by using their own criteria” (Pavot & Diener, 1993,

p. 164). Satisfaction with life, in terms of this scale, is not specified in terms of finances, health, etc., but instead gives the respondent the agency to decide to what degree they are satisfied with their own lives (Pavot & Diener, 1993). Diener, Suh, and Oishi (1997) further examined the scale as a measure of subjective well-being, determining that it, while primarily a cognitive scale, can aid in understanding undesirable clinical states as well as “differences between people in positive levels of long-term well-being” (p. 25). More recent studies have utilized subjective well-being scales of self-esteem and satisfaction with life in relation to SNS and social media studies (Ellison et al., 2007; Steinfield et al., 2008). The scale of satisfaction with life at a university was adapted from the Satisfaction with Life Scale (SWLS) (Diener, Suh, & Oishi, 1997; Pavot & Diener, 1993), and is a five-item instrument designed to measure global cognitive judgments of one’s life. Following the method of Ellison et al. (2007) and Steinfield et al. (2008), each of the items were amended to refer specifically to the context of the specific university at which this study took place, which Ellison et al. (2007) reported a Cronbach’s alpha = .87. Examples of items modified by Ellison et al. (2007) include: “In most ways my life at my university is close to my ideal,” and “If I could live my time at my university over, I would change almost nothing.” Responses included the five-point Likert scale of ‘Strongly Agree,’ ‘Agree,’ ‘Neutral,’ ‘Disagree,’ and ‘Strongly Disagree.’ For this study, reliability for satisfaction with life was found to have a Chronbach’s alpha of .87 ( $M = 11.14$ ,  $SD = 3.74$ ).

**Social Capital.** Again following Ellison et al. (2007) and Steinfield et al. (2008), two forms of social capital were measured with separate scales – both bridging and

bonding social capital. These scales had new items added by Ellison et al. (2007) from the original scale developed by Quan-Haase and Wellman (2004), which were designed to capture Internet-specific social capital.

*Bridging Social Capital.* This measure is designed to assess the extent to which participants experienced bridging social capital, which is believed to be better-suited for linking to external assets and for information diffusion (Putnam, 2000). According to Williams (2006), “members of weak-tie networks are thought to be outward looking and to include people from a broad range of backgrounds. The social capital created by these networks generates broader identities and generalized reciprocity” (n.p.). Items from Williams’ (2006) bridging social capital subscale were used as well as the three additional items created by Ellison et al. (2007) intended to measure bridging social capital in the university context to create a combined bridging social capital scale (Cronbach’s alpha = .87). Items that Ellison et al. (2007) used to measure bridging social capital included items such as “If I needed an emergency loan of \$100, I know someone at my university I can turn to,” and “The people I interact with at my university would be good job references for me,” with responses also set to the five-point Likert scales ranging from ‘Strongly Agree’ to ‘Strongly Disagree.’ For this study, bridging social capital was found to have a Chronbach’s alpha of .75 ( $M = 10.93$ ,  $SD = 3.50$ ).

*Bonding Social Capital.* Bonding will be assessed using five items from the bonding subscale of the Internet social capital scales developed and validated by Williams (2006) with responses being reported on a five-point Likert scale, as was done by Ellison et al. (2007) and Steinfield et al. (2008). These items will be adapted to the

context of the current university. Ellison et al. (2007) found that when these items were adapted to the context of a university, the measure was still reliable (Cronbach's alpha = .75.). Items used by Ellison et al. (2007) for measuring the bonding of social capital included "Interacting with people at my university makes me feel like a part of a larger community," and "I am willing to spend time to support general university activities." Responses were also set to the five-point Likert scales ranging from 'Strongly Agree' to 'Strongly Disagree' (p. 1154). For this study, the measure bonding social capital was found to have a Chronbach's alpha of .87 ( $M = 15.95$ ,  $SD = 4.79$ ).

### **Data Analysis**

Pearson correlations were conducted in SPSS software to test the hypotheses outlined in Chapter Two. Alpha was set at .05.

## CHAPTER FOUR

### RESULTS

#### **Hypotheses**

To test the hypotheses outlined in Chapter Two, data was collected and entered into SPSS. Initial Pearson correlations were conducted on the full sample of participants. Table 1 outlines the correlations for those who self-reported as Yik Yak users, and Table 2 outlines participants who self-reported they did not use the app. Tests were run to check for confounds in the data, such as gender, to which none were found.

H1 predicted that students who utilize Yik Yak with greater intensity would report lower perceived self-esteem. A Pearson correlation revealed that the relationship between self-esteem and intensity was not significant for Yik Yak users,  $r = -.04, p > .05$ .

Therefore, H1 was not supported. There was not a significant correlation between YakKarma score and self-esteem,  $r = .06, p > .05$ , or minutes per day spent on Yik Yak and self-esteem,  $r = .02, p > .05$ .

H2 predicted that students who utilize Yik Yak with greater intensity would report higher satisfaction with life at their university. A Pearson correlation revealed that the relationship between Yik Yak intensity and satisfaction with life among this sample was not significant,  $r = .03, p > .05$ . There was not a significant correlation between YakKarma score and satisfaction with life,  $r = -.02, p > .05$ , or minutes per day spent on Yik Yak and satisfaction with life,  $r = .07, p > .05$ .

H3 predicted that Yik Yak intensity scores would be positively associated with perceived bonding of social capital, and was not supported by a Pearson correlation,  $r = -$

.05,  $p > .05$ . YakKarma score,  $r = -.04$ ,  $p > .05$ , nor minutes per day spent on Yik Yak,  $r = .16$ ,  $p > .05$ , yielded a significant relationship with bonding social capital.

H4 predicted that Yik Yak intensity scores would be positively associated with bridging social capital scores, which was supported by one measure of intensity – minutes per day spent on Yik Yak,  $r = .19$ ,  $p < .05$ . However, the Likert scales related to intensity showed no significant relationship with bridging of social capital,  $r = -.09$ ,  $p > .05$ , nor did the relationship between bridging social capital and YakKarma score,  $r = .05$ ,  $p > .05$ .

Table 1

*Descriptive Statistics and Pearson Correlations for all Variables for Yik Yak Users*

Measure	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.
<b>1. Self -Esteem</b>	13.07	3.82	--						
<b>2. Life Satisfaction</b>	11.14	3.49	.26 (.31)**	--					
<b>3. Bonding Social Capital</b>	15.59	4.47	.20 (.24)*	.61 (.70)**	--				
<b>4. Bridging Social Capital</b>	10.94	3.55	.39 (.50)**	.54 (.67)**	.54 (.67)**	--			
<b>5. Intensity</b>	21.73	4.51	-.04 (-.05)	.03 (.03)	-.05 (-.06)	-.09 (-.11)	--		
<b>6. Intensity: YakKarma</b>	6328.16	16609.1	.06 (.07)	-.02 (-.02)	-.04 (-.05)	.05 (.06)	-.31 (-.35)**	--	
<b>7. Intensity: Minutes/Day</b>	.92	1.08	.02 (.02)	.07 (.08)	.16 (.18)	<b>.19 (.23)*</b>	-.59 (-.66)**	-.20 (-.22)*	--

*Note.* Disattenuated correlations appear within parenthesis.

\*Correlations are significant at  $p < .05$ .

\*\*Correlations are significant at  $p < .01$ .

Table 2

*Descriptive Statistics and Pearson Correlations for all Variables for Non-Yik Yak Users*

Measure	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.
<b>1. Self -Esteem</b>	13.07	3.91	--						
<b>2. Life Satisfaction</b>	11.13	4.01	.48 (.57)**	--					
<b>3. Bonding Social Capital</b>	16.32	5.08	.34 (.40)**	.67 (.77)**	--				
<b>4. Bridging Social Capital</b>	10.92	3.46	.50 (.64)**	.66 (.82)**	.67 (.83)**	--			
<b>5. Intensity</b>	27.61	3.40	.04 (.05)	.01 (.01)	.06 (.07)	.03 (.04)	--		
<b>6. Intensity: YakKarma</b>	134.82	484.36	.04 (.05)	-.07 (-.08)	.03 (.03)	-.03 (-.04)	-.30 (-.34)**	--	
<b>7. Intensity: Minutes/Day</b>	.10	.52	.01 (.01)	-.11 (-.13)	-.11 (-.13)	-.10 (-.12)*	-.30 (-.34)**	.28 (.31)*	--

*Note.* Disattenuated correlations appear within parenthesis.

\*Correlations are significant at  $p < .05$ .

\*\*Correlations are significant at  $p < .01$ .

## Post-Hoc Analyses

Since the guiding research question queried the relationship among Yik Yak intensity, social capital, and satisfaction with life at a university, additional analyses were conducted.

First, the data was split in SPSS to provide insight on the self-reported data between Yik Yak users ( $N = 131$ ) and non-users ( $N = 124$ ). It was found that the correlation between self-esteem and satisfaction with life was not only significant for both groups, but much higher among non-users  $r = .48, p < .01$ , versus those who use the smartphone application  $r = .26, p < .01$ .

The relationship between both bonding and bridging social capital and self-esteem was also significant for both groups, with those who do not use the app producing a higher correlation. There was a positive correlation for bonding social capital and self-esteem among Yik Yak users  $r = .20, p < .05$ , and a moderate positive correlation between bonding social capital and self-esteem for non-users  $r = .35, p < .01$ . The relationship between bridging social capital and self-esteem in Yik Yak users yielded a moderate positive correlation,  $r = .40, p < .01$ , and the relationship between bridging social capital and self-esteem in non-users was higher,  $r = .50, p < .01$ .

The data was then split by gender to look for variations between male ( $N = 101$ ) and female participants ( $N = 154$ ). Pearson correlations revealed that the relationship between self-esteem and satisfaction with life was significantly greater for male participants,  $r = .51, p < .01$ , than female participants,  $r = .29, p < .01$ . However, the relationship between both bonding and bridging social capital and satisfaction with life

yield higher significant correlations among females than males. There was a stronger positive correlation between bonding social capital and satisfaction with life for females,  $r = .70, p < .01$  than that was reported by males,  $r = .60, p < .01$ . There was also a stronger positive correlation between bridging social capital and satisfaction with life among female participants,  $r = .65, p < .01$  than that of males,  $r = .53, p < .01$ . Among female participants, Pearson correlations also revealed a significant negative correlation between minutes per day spent on Yik Yak and Yik Yak intensity,  $r = -.63, p < .01$ , while male participants produced a weak positive correlation,  $r = .28, p < .05$ .

One of the demographic questions in the survey asked participants if they were a member of a fraternity or sorority, so the data was split again to explore differences in those who are involved in Greek life ( $N = 86$ ) versus those who are not ( $N = 169$ ). Pearson correlations revealed that those who were involved in Greek life showed a slightly lesser relationship between self-esteem and satisfaction with life,  $r = .34, p < .01$ , than those who were not members,  $r = .40, p < .01$ . The correlations between satisfaction with life and bridging capital were greater for participants who were not involved in Greek life,  $r = .46, p < .01$ , over those who were,  $r = .67, p < .01$ . The correlations between satisfaction with life and bonding social capital yielded similar results with Greek life members having a lower correlation,  $r = .39, p < .01$ , than non-members,  $r = .68, p < .01$ .

Although these relationships between variables in differing groups, such as gender and Greek life, were found to be individually significant in SPSS, the differences

in the values of the Pearson correlations (i.e.,  $r$  value) may not be statistically different, so inferences made from these findings are limited.

To further validate the data set, a linear regression was conducted in SPSS to test predicting relationships among variables. The regression revealed that minutes per day spent on Yik Yak was a significant predictor for YakKarma score,  $\beta = 1.92$ ,  $t = 3.75$ ,  $p < .01$ . Minutes per day also explained a significant proportion of variance in YakKarma score,  $R^2 = .07$ ,  $F(253) = 14.2$ ,  $p < .01$ .

## CHAPTER FIVE

### DISCUSSION

#### **Theoretical Implications**

This study of Yik Yak provides interesting insight to future media research, particularly for social media applications that do not quite meet the criteria for Ellison and boyd's (2013) definition of a SNS. Given the recommendation of Ellison and Vitak (2015) to focus on users' interaction patterns and network composition in future research, taken in tandem with the precedence for studying college undergraduate students in terms of social capital, the nature of Yik Yak and its use on college campuses was well suited for the nature of these measures. This study recognized from the start that Yik Yak does not fit the most recent definition of a SNS, as outlined by Ellison and boyd (2013) – it differs because it does not have uniquely identifiable profiles, nor does it publicly articulate one's connections. It does, however, meet the third criterion of displaying streams of user-generated content as well as having inferred connections as being those who are located on a college campus, and provides profile images in the form of clipart of objects (such as socks, lanterns, etc.) to make it easier to address other anonymous users by calling them by the name of their profile image. The lack of support for some of the hypotheses could be rooted in these differentiations from the SNS definition. Future research could explore the nuances of social media, including the current definition for a SNS and perhaps expanding it or developing a new term to describe platforms that do not fall under its definition.

Social media platforms may have different purposes, which is an important part of these findings. Perhaps the purpose of Yik Yak is specifically for bridging social capital – connecting weak ties and interacting with diverse others without the social pressures. The significance and support of H4 demonstrates how that could be true. With that being its one purpose and niche, this is where users flock. However, that is not to say that other social media do not have niche uses where the other measures used in this study might be more successful.

The original applications of these measures used by Ellison et al. (2007) and Steinbeck et al. (2008) studied the perfect example of how these measures culminate – Facebook. It affords opportunities to boost self-esteem and increase your satisfaction with life, as well as improve both bridging and bonding social capital – a user can connect with longtime family and friends or begin to network with acquaintances. Because other platforms similar to Facebook have fallen out of popularity (e.g., MySpace, Friendster), it seems that they hold the monopoly on the perfect mixture where uses and gratifications from the measures included in the study could be found in one place. Future research could explore how different platforms have different niches, and not only explore the uses and gratifications of each platform, but the extent to which they may be suited for the measures used in this study.

Steinfeld et al. (2008) and Ellison et al. (2007) found that those with lower self-esteem found greater benefit to using the SNS Facebook, so it would follow that the same concept would be applicable to Yik Yak, if not to a higher degree because of the anonymous nature of app, leaving more room for freedom of expression and self-

disclosure. However, as discovered through this study, that is not necessarily the case. To make the case for cyberbullies being the most frequent demographic Yik Yak user, it was found through post-hoc analyses that non-Yik Yak users generally reported an overall higher self-esteem and satisfaction with life than those who reported they do use the app. This could mean that although the hypotheses were not supported, the maxim that bullies have a low self-esteem and belittle others to make themselves feel better could still be true. Patchin and Hinduja (2010) found that middle school students who experienced cyberbullying, both as a victim and as an offender, had significantly lower self-esteem than those who had little or no experience with cyberbullying. In this situation, it may be the ‘offenders’ who have reported lower self-esteem and satisfaction with life.

Another type of user, aside from the cyberbully, could be the situation of an individual seeking anonymity as an avenue for a temporary identity. This variety of individual may have a somewhat lower self-esteem than a non-Yik Yak user, but not necessarily very low self-esteem. Yik Yak would afford them informational and social support they seek without providing personal information, yet some of their personal information (i.e., their location) would already be known because of the nature of the app’s location-bound feeds. If an individual were to say something humorous on Yik Yak that receives upvotes, it provides them with the social support and affirmation that they need; they would not be expected to immediately say something witty in real life, but could still get the satisfaction from the Yik Yak community in the form of comments and upvotes. Leavitt (2015) studied the use of ‘throwaway accounts’ on the forum-based website Reddit and created a predictive model that suggests that perceptions of

anonymity significantly shape the potential uses of throwaway accounts. Viewing perceived anonymity as a spectrum, instead of the dichotomous you ‘are’ or ‘are not’ anonymous, Leavitt (2015) created measures that assessed Reddit users’ perceived anonymity and selected self-presentation. The application of this study may be more readily applicable to the context of Yik Yak, but instead of creating a ‘throwaway account’ the user already has one, in essence, because of his or her perceived anonymity. Ultimately, the study found that in cases of lower perceived anonymity people are more likely to use a temporary identity (Leavitt, 2015). If perceived anonymity is something that was measured among Yik Yak participants, greater insight on users selected self-presentation could be gained and play into Leavitt’s (2015) idea of ‘temporary identity.’

### **Practical Implications**

For the average Yik Yak user – college students in the United States – there are several implications from this study that might be considered. While the literature demonstrated that undergraduate students frequently rely on SNSs to cope with the transition to college life, Yik Yak does fall outside the realm of a SNS. Although Yik Yak affords anonymity to users, perhaps the type of users taking advantage of this affordance are not those in which the study assumed they would be – those with self-reported lower self-esteem. The correlations assessing Yik Yak intensity and these measures of subjective well being (self-esteem and satisfaction with life) were not significant, nor was the relationship between bonding social capital (which refers to strong ties) and Yik Yak intensity. The only hypothesis that was supported was the correlation between Yik Yak intensity in minutes per day spent on the app and bridging

social capital (which refers to weak ties). It is logical that the relationship between bridging social capital and time spent on Yik Yak is significant; as time spent in the app increases, the more posts and app users one would come across. While student users may argue against the claims that the app is a platform for cyberbullying (Clark, 2016), this may support that claim on the types of users who engage actively with the app.

These findings have implications particularly for university administrators and counselors. Yik Yak can be used as a gauge to determine campus climate or sentiment about the university among the population of app users. By monitoring activity on the app, university administrators can learn more about their student population. While this may be specific only to students who utilize the app, it is a tool that could be key to understanding a large portion of the student population. University counselors, specifically, can learn from monitoring mobilization requests made within the app, and such requests could be integrated into existing university policies and procedures for chatting with at-risk students. The significant results of this study in relation to bridging social capital are indicative of the app being used in an effort to engage with new, diverse people (i.e., weak ties). What the results imply, but do not specifically measure, is the likelihood that some of the app users choose to engage with diverse others in ways that might be considered cyberbullying or in poor taste/humor. Because of the significance found in this type of interaction, future research could assess the likelihood for individuals looking to bridge social capital through the app to do so maliciously or with intent to bully and put down others, which was beyond the scope of this study.

However, because the app is used to engage with diverse others, outside one's established network, Yik Yak could be harnessed by universities to engage in networking among peers. Under the veil of anonymity, students may feel more comfortable to participate with challenging topics, and for instructors in popular culture, this may be an interesting avenue for discussion. If teachers were to post relevant discussion questions to Yik Yak, instead of a traditional discussion board in Blackboard, they could provide students with anonymity to speak freely, as well as get input from others who were not students currently enrolled in the course.

### **Methodological Implications**

Given the recommendation of Ellison and Vitak (2015) to focus on users' interaction patterns and network composition in future research revolving around social capital, perhaps development of different measures or different methods to better understand the actual interaction patterns, versus replicating a study in a new context, could be an avenue to explore in future research. It is clear that all social platforms are not created equally, especially those that differ from the traditional idea of a SNS.

Another concept that features possible limitations is the intensity scale created by Ellison et al. (2007). Ellison et al. (2007) reported Cronbach's alpha = .83 in using this scale within the context of studying Facebook, and the scale combines the concepts of frequency and duration into one measure. However, because all of the hypotheses relied on this scale, perhaps it is better served specifically for SNS's like Facebook, and not necessarily for other social media that do not meet the Ellison and boyd (2013) definition. Although the Likert intensity scales were reliable, these questions heavily rely on a social

media platform to be embedded into everyday life and culture, much like Facebook has become. While it may seem so on the surface, Yik Yak may not yet have such a loyal following among college students who feel that they cannot go about their daily lives without using the app. Future research that chooses to employ this concept of intensity should not only consider the amount of time invested into the subject of study, but also the level of emotional attachment.

The procedure and the sample could be seen as potential weaknesses to this study. The sampling was conducted in a large lecture basic communication course, in the hope of receiving a diverse sample in the context of a university. However, because the majority of students who take the basic communication course are younger in age and in year in school, this could have skewed the sample. Perhaps, for freshman just arriving to the university, the use of Yik Yak had not grown as popular yet as it had for upperclassmen that have had more time to be exposed to the app and campus community. The sample was split almost evenly between self-reported Yik Yak users and non-Yik Yak users. Had the use of Yik Yak been made a stringent requirement, and the sample had been larger, the correlations may have yielded different results. However, with a larger sample of Yik Yak users alone, comparisons between groups could not have been made. The finding that those who do not use Yik Yak produce a higher correlation between self-esteem and satisfaction with life would not have been found outside the context of this study.

## **Areas for Future Research**

The network composition and interaction patterns on Yik Yak are unique to the platform. Beyond bridging social capital, it would seem that the platform is not well suited to social capital studies, despite its unique composition of both weak and strong ties, clouded in anonymity. Future research could focus on these areas in other niche platforms that do not entirely meet Ellison and boyd's (2013) definition of a SNS to gain a better understanding of other outlying social platforms that are gaining popularity. For future research, this study makes three recommendations, all of which are outlined in the following paragraphs. First, utilizing uses and gratifications theory to guide research design. Second, incorporating social support and satisfaction with life together as complementary research concepts. Third, extending theories for social media platforms that do not qualify as a SNS, and further exploring perceived anonymity and temporary identities.

First, future research should consider the uses and gratifications of each platform before applying all measures of this study. According to uses and gratifications theory, media consumers are goal-oriented and seek out media sources that best fulfill their needs (Blumler & Katz, 1974). Ruggiero (2000) argued that with each new wave of technology, such as newspapers, television, and the Internet, uses and gratifications theory has been revitalized. Future studies should recognize the importance of understanding the motivations for why users choose their media, and that there could be a revitalization of the theory with the generation of the smartphone and apps.

In the same vein, different apps are created continuously in today's market for niche purposes, so uses and gratifications should be considered in the research design phase of all media research. Drawing from the concepts and theories driving this study, certain facets could be separated out for future research that are specific to uses of an app that would not necessarily be a good fit for all of those used by this study. For example, the application Instagram may be useful to examine in terms of self-esteem and satisfaction with life. Users of the app may post photos of themselves, and based on the amount of 'likes' and other interactions they get, it could boost their self-esteem. Another example for a different measure used in this study could be bonding social capital – deepening connections with close ties. Messaging applications such as GroupMe or WhatsApp, could be suited to this variety of study because they connect people so they can communicate directly with others, even across international borders, as long as there is an Internet connection.

As previously mentioned, Yik Yik and the location-bound anonymity it affords make it a viable platform for bridging social capital. Previous studies (Ellison et al., 2007; Steinbeck et al., 2008) used all five measures used in this study for Facebook and found significant results. Facebook users keep in touch with old connections and make new networking connections through the platform. Facebook users also keep abreast of happenings in communities they currently or formerly belong to, so the uses and gratifications of such a platform fit with the measures of self-esteem, satisfaction with life, bridging and bonding social capital, and intensity. Future research seeking to combine these scales in some way should consider incorporating new measures that are

specific to the platform under investigation, which may produce new and interesting findings.

One example of a theory that may be useful to conceptualize Yik Yak is social support. Incorporating approaches to social support that cover a wide variety of verbal and behavioral expressions of social support could provide a better understanding of mobilization requests made within the Yik Yak app. The main functions of social support, including material aid, behavioral assistance, intimate interaction, guidance, feedback, and positive social interaction (Barrera & Ainlay, 1983; Gottlieb & Bergen, 2010) could be applicable to the types of bridging social capital that is done within the app. Perhaps future research with Yik Yak that measures satisfaction with life could also incorporate this concept to gain a greater understanding of the functions social support and mobilization requests within the app, and how that is associated with satisfaction with life at a university for students who use the app.

Finally, a concept that could be incorporated into future research on Yik Yak is Leavitt's (2015) concept of 'perceived anonymity,' which views anonymity as a self-presentation spectrum, not as dichotomous. Because Yik Yak users are usually location-bound to college campuses, there is only a certain degree of anonymity afforded. When weighing that in with the factor that individuals choose the amount they disclose, there may be little to no anonymity afforded to the user. The idea of anonymity as a spectrum, as well as the incorporation of the theoretical concepts of perceived anonymity and perceived self-presentation would be beneficial to future lines of Yik Yak research. If perceived anonymity was measured among Yik Yak users, greater insight on users

selected self-presentation could be gained and play into Leavitt's (2015) idea of 'temporary identity,' as discussed previously in the theoretical implications for this study.

## **Conclusion**

This thesis addressed how individuals use the app Yik Yak, and whether or not students' use of Yik Yak falls closer to how the media portrays Yik Yak or what the founders of the app intended it to be. In an effort to begin a scholarly conversation surrounding the app, this study has begun to delve into the research potential of Yik Yak. This study has initiated the process of demystifying how students use the app and how it affects their lives – which yielded significant results centering on the idea of bridging social capital. Bridging social capital, according to Putnam (2000) takes place among social networks between socially heterogeneous groups. Bridging allows different groups to share and exchange information, ideas and innovation and builds consensus among the groups representing diverse interests.

Ellison et al. (2007) and Steinfield et al. (2008) found that among undergraduate students using Facebook, bridging social capital was the highest amount of perceived capital. They also found that Facebook may hold greater benefits for those suffering from low self-esteem (Ellison et al., 2007; Steinfield et al., 2008). Yik Yak may also hold greater benefit to those suffering from low self-esteem because of its potential for bridging social capital. However, there are other avenues in which the app can be explored and further examined to understand how anonymous-like apps truly fit into the lives of college students across the United States.

Since the release of the app in November of 2013, it has been frequently featured in the popular media. Because it is still a relatively new social platform, it is still forming its roots among users. Only time will tell if it is going to take hold and become a popular forum for college student users, if it will develop into something that can be harnessed for social and political debate and revolution, or if it will fall by the wayside like many platforms that came before it.

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Appendix A

Yik Yak Survey

**Instructions:** Please respond to the survey questions below. Please circle one answer per question. For open-ended questions, please provide an exact numerical response (e.g. number of hours, minutes, etc.).

**Section I**

Gender:

- Male
- Female

Age:

Ethnicity:

- White
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian / Pacific Islander
- Other

Year in school:

- Freshman
- Sophomore
- Junior
- Senior
- Grad Student
- Other

Home residence:

- In-state
- out-of-state

Local residence:

- on campus
- off campus

Member of fraternity or sorority:

- Yes
- No

Hours of Internet use per day:

YikYak user:

Yes

No

## **Section II**

I feel that I'm a person of worth, at least on an equal plane with others.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

I feel that I have a number of good qualities.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

All in all, I am inclined to feel that I am a failure.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

I am able to do things as well as most other people.

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

I feel I do not have much to be proud of.

Strongly Agree

Agree  
Neutral  
Disagree  
Strongly Disagree

I take a positive attitude toward myself.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

On the whole, I am satisfied with myself.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

### **Section III**

In most ways my life at Clemson University is close to my ideal.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

The conditions of my life at Clemson University are excellent.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

I am satisfied with my life at Clemson University.

Strongly Agree  
Agree

Neutral  
Disagree  
Strongly Disagree

So far I have gotten the important things I want at Clemson University.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

If I could live my time at Clemson University over, I would change almost nothing.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

#### **Section IV**

I feel I am part of the Clemson University community.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

I am interested in what goes on at Clemson University.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

I would be willing to contribute money to Clemson University after graduation.

Strongly Agree  
Agree  
Neutral  
Disagree

Strongly Disagree

Interacting with people at Clemson University makes me want to try new things.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

Interacting with people at Clemson University makes me feel like a part of a larger community.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

I am willing to spend time to support general Clemson University activities.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

At Clemson University, I come into contact with new people all the time.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

Interacting with people at Clemson University reminds me that everyone in the world is connected.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

## Section V

There are several people at Clemson University I trust to solve my problems.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

If I needed an emergency loan of \$100, I know someone at Clemson University I can turn to.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

There is someone at Clemson University I can turn to for advice about making very important decisions.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

The people I interact with at Clemson University would be good job references for me.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

I do not know people at Clemson University well enough to get them to do anything important.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

## Section VI

What is your YakKarma Score?

In the past week, on average, approximately how many minutes per day have you spent on Yik Yak?

Yik Yak is part of my everyday activity.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

I am proud to tell people I'm on Yik Yak.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

Yik Yak has become part of my daily routine.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

I feel out of touch when I haven't logged onto Yik Yak for a while.

Strongly Agree  
Agree  
Neutral  
Disagree  
Strongly Disagree

I feel I am part of the Yik Yak community.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

I would be sorry if Yik Yak shut down.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree