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Toward a Uses and Gratification's Model of Twitter

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ABSTRACT

This study proposed a uses and gratifications model of Twitter, an internet medium and *micro-blog*—a platform with both mass and interpersonal communication features for sending short messages to others. A survey was conducted among 242 Twitter users to test the model, including a standard investigation of gratifications sought and gratifications obtained of Twitter usage. In addition, expectations and availability of usage behaviors from McLeod and Becker's (1981) uses and gratifications model were examined. In the model, expectations were conceptualized as user *expectations of satisfaction* and operationalized as the difference between users' gratifications sought and gratifications actually obtained. Usage behavior availability was conceptualized as *accessibility*. The model hypothesized that (a) expectations of satisfaction are positively related to Twitter use; (b) accessibility is positively related to both expectations of satisfaction and Twitter use; and (c) that prior Twitter experience is negatively related to expectations of satisfaction and positively related to Twitter use. Multivariate analysis found two gratifications factors—*social* and *information*. Accessibility was positively related to expectations of satisfaction, but not Twitter use. Prior Twitter experience was positively related to Twitter use, but not expectations of satisfaction. Expectations of satisfaction also did not significantly predict Twitter use as the differences between gratifications sought and obtained were small. Counterintuitive to previous research noting social aspects of the internet, information gratifications significantly predicted Twitter use, while social gratifications did not.

TOWARD A USES AND GRATIFICATIONS MODEL OF TWITTER

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Within my first year of returning to academia I was blessed again and again with opportunities to work with supportive faculty who saw something deep within me that—at first—I failed to recognize. I have always had a passion and drive to seek out stimulating endeavors by moving from one thing to the next to see where life would take me. But it was not until I received much needed guidance from my committee members and others that I realized my creativity and ideas developed over the years were being validated each and every day I set foot into a classroom or office of one of my many mentors here at Syracuse University. This validation has helped me to fully understand and appreciate scholarly work to the extent that I have never in my life felt more comfortable and confident that academia is my true calling in life. My thesis has had its ups and downs with issues that most young scholars face, and if it were not for the support that I received over these past few years, I would have moved on into the industry without looking back.

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TABLE OF CONTENTS

LIST OF ILLUSTRATIVE MATERIALS

Chapter 1: Introduction

Humans are social creatures by nature, and the growth of technologies and mass media on the internet have revealed new venues for individuals to communicate with each other, such as social networking sites and social media. *Social networking sites*, used interchangeably with *social media* in this study, are defined as "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system" (Boyd & Ellison, 2007, p. 211). Examples include blogs, discussion boards or forums, Facebook, Twitter, YouTube, and Wikipedia.

Social media that are built on the internet rise and fall in popularity, but those that are the most successful have greater capacities enabling individuals to perform social behaviors and interact with each other in an online—rather than face-to-face—environment, such as the social networking site Facebook (Nyland, 2007). Internet usage trends confirm this proposition. For example, a March 2009 Nielsen Online[1] study reported that internet users spend more time using social networking sites and blogs than email (Nielsen Online, 2009). In only 12 months, Facebook experienced a 150% growth in web site traffic from February 2008 to February 2009 (Raphael, 2009).

The internet has evolved from a single mass medium (Morris & Ogan, 1996) to a medium of *multiple* media—supporting mass communication (e.g., blogs and online newspapers), interpersonal communication (e.g., email and instant messaging), and combinations of both (e.g., Twitter and Facebook). At its basic level, the internet is the infrastructure that allows multiple

[1] http://www.nielsen-online.com

media to coexist, build on each other, and create new ways of satisfying the individual and social needs of an active audience.

Abercrombie and Longhurst (2007) define an *active audience* as one that freely interacts with and interprets the messages they receive from mass media. Individual behaviors are motivated by particular needs at a given point in time, and audience members choose which media to use or not use, while also seeking out non-media use behaviors. The forms of internet media best suited to satisfy the needs of its users are often those that are the most accessible and easy to use—people like to feel as if they have some control over the medium to fulfill their needs.

Decades before the internet was born, McLuhan (1964) stated that "the medium is the message." Even today, this statement holds true and best illustrates the social effects of the internet. It encapsulates how the introduction of a medium like the internet has both intended and unintended consequences:

> [The] personal and social consequences of any medium—that is, of any extension of ourselves—result from the new scale that is introduced into our affairs by each extension of ourselves, or by any new technology. […] Many people would be disposed to say that it was not the machine, but what one did with the machine, that was its meaning or message. (p. 23)

To grasp the social effects of the exponential growth of the internet (Odlyzko, 2003) and its multiple forms of media—specifically, its impact on human behavior—researchers in mass communication have revived the uses and gratifications approach as a way of understanding motivations and communication behaviors of internet users (Chung & Kim, 2008; Ebersole, 2000; Ko, 2000; LaRose & Eastin, 2004; LaRose, Mastro, & Eastin, 2001; Peters, Rickes,

Jockel, Criegern, & Deursen, 2006; Stafford, Stafford, & Schkade, 2004; Webster & Lin, 2002). A meta-analysis by Kim and Weaver (2002) of internet communication research found that internet uses and perceptions studies were the second most common topic for researchers, and that within this topic, uses and gratifications was the most common theory used.

Early usage studies treated the internet as a single mass medium, researching motivations and behaviors of traditional mass media audiences (e.g., television). Motivations such as social interaction, passing time, information seeking, convenience, and diversion/entertainment were common (Charney & Greenberg, 2002; Papacharissi & Rubin, 2000). However, these motivations do not necessarily help us understand usage from the perspective of the internet as a medium of multiple media. More recent studies have begun to treat the internet as a medium that offers multiple ways of communicating, such as instant messaging (Hwang, 2005), social media like Facebook (Joinson, 2008), and YouTube (Shao, 2008).

Uses and gratifications studies are typically concerned with comparisons of the gratifications sought and the gratifications obtained by audience members. *Gratifications sought* are the various needs or motivations for media and non-media use and communication behaviors. *Gratifications obtained* are the "perceived personal outcomes" of media use (Rubin, Sypher, & Palmgreen, 1994, p. 173). Comparisons have shown that while individuals purposely use media to fulfill certain needs, their needs are not always satisfied (Palmgreen, Wenner, & Rayburn, 1980; Rayburn & Palmgreen, 1984).

This study applies the uses and gratifications approach as a way of investigating usage of Twitter, a micro-blogging technology and form of mass media integrating aspects of both mass and interpersonal communication—much like the internet Twitter is built on. Murphy (2008) defines a *micro-blog* as a platform for publishing and sharing short (140 characters or less)

messages with others within a user's social network. Similar to blogs, a micro-blog delivers these short messages in reverse chronological order—hence the term micro-blogging.

Middlebrook (2007) states that Twitter became popular because of its simplicity and accessibility. Limiting updates, also known as "tweets," to 140 characters is viewed as a positive communication restriction—it is faster to send a short update to Twitter than it is to write a longer blog post or email. Furthermore, Twitter is accessible from nearly anywhere. Users can send updates and read other users' updates from a web browser, a mobile phone, or from one of the many desktop and mobile applications that connect directly to Twitter.

Accessibility is one of Twitter's defining characteristics contributing to its success. *Accessibility* is defined as the perceived ease of use of a medium (Venkatesh & Davis, 2000) and the degree to which media use behaviors are available for selection. For example, watching television requires you to be in a physical location with a television present. Twitter, on the other hand, is accessible from nearly anywhere, and to anyone with a mobile phone or computer with an internet connection. The mobility of Twitter has increased the availability of Twitter use behaviors, and this trend is expected to continue. At the time of this writing, a comScore[2] study found that the number of mobile internet users more than doubled in the 12 months from January 2008 to January 2009 (comScore, 2009). A Nielsen Online report also supports this trend, reporting that nearly three out of four U.S. mobile phone consumers plan to use a mobile data service (e.g., internet, email, multimedia messaging) on a daily basis (Baar, 2009).

[2] http://www.comscore.com

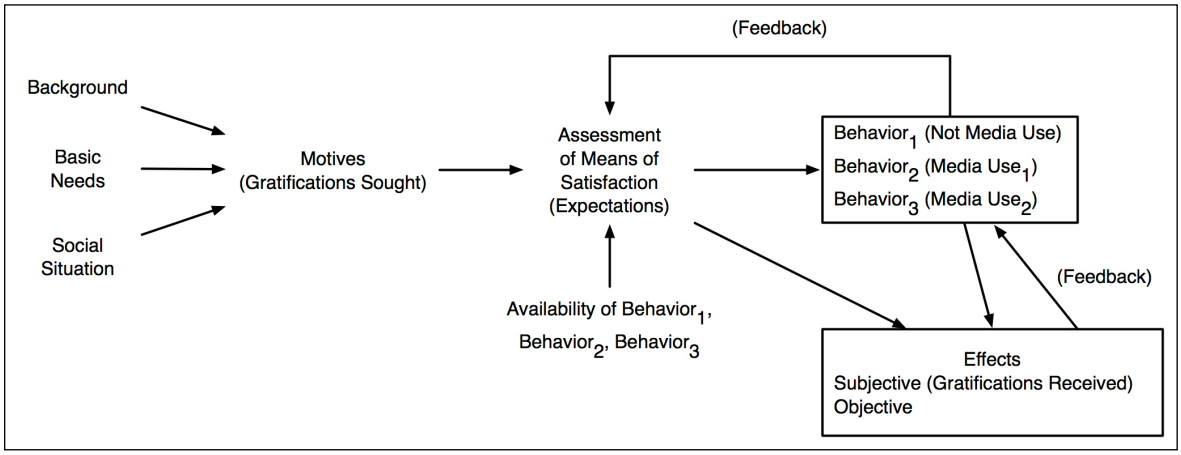

Figure 1. A uses and gratifications model by McLeod and Becker (1981).

Figure 1 outlines a uses and gratifications model by McLeod and Becker (1981). The availability of media and non-media use behaviors, expectations, and gratifications received influence which behaviors are ultimately chosen to satisfy an individual's motive. *Expectations* are defined as the "rough probabilities of satisfaction assigned" by individuals to various media use behaviors (p. 74). Thus, users assess the odds of which behaviors will best satisfy a given need or motivation prior to selection. An individual's prior experience with certain behaviors influence these assessments (i.e., feedback). *Prior experience* is an individual's familiarity with a medium, resulting from the length of time an individual has been using a particular medium. In the case of Twitter, which was launched in October 2006 (Williams, 2007) and less than a few years old at the time of this writing, prior experience may be small; perhaps a few months.

The purpose of this study is to design and test a uses and gratifications model of Twitter use by examining prior Twitter experience, and gratifications sought and obtained. Additionally, McLeod and Becker's (1981) notions of expectations and availability will also be examined. Expectations are conceptualized as expectations of satisfaction, and availability is conceptualized as accessibility. Expectations of satisfaction are operationally defined as a function of the

differences between gratifications sought and obtained. Similar operationalization strategies are found in expectancy-value approaches (Palmgreen & Rayburn, 1985; Rayburn & Palmgreen, 1984) and in consumer satisfaction literature (Cadotte, Woodruff, & Jenkins, 1987; Spreng, MacKenzie, & Olshavsky, 1996).

A Uses and Gratifications Model of Twitter

In the proposed model shown in Figure 2, gratifications sought, gratifications obtained, and prior Twitter experience directly influence Twitter use—individual use of Twitter is based on motivations, satisfaction of those motivations, and familiarity with the medium. The model also shows that an individual's expectations of satisfaction are directly influenced by accessibility and prior Twitter experience—if it is perceived as easy to use, user expectations of satisfaction will be higher. However, prior Twitter experience—or familiarity—will be negatively related to expectations of gratifications as the novelty of the medium wears off over time and expectations are internalized (i.e., checking email every morning is a habit that users expect very little from). Accessibility is shown in the figure to directly influence Twitter use—if Twitter is perceived as not very accessible or easy to use to use, Twitter use is expected to decrease. Each variable and hypothesis in the model will be explained at length in the next chapter.

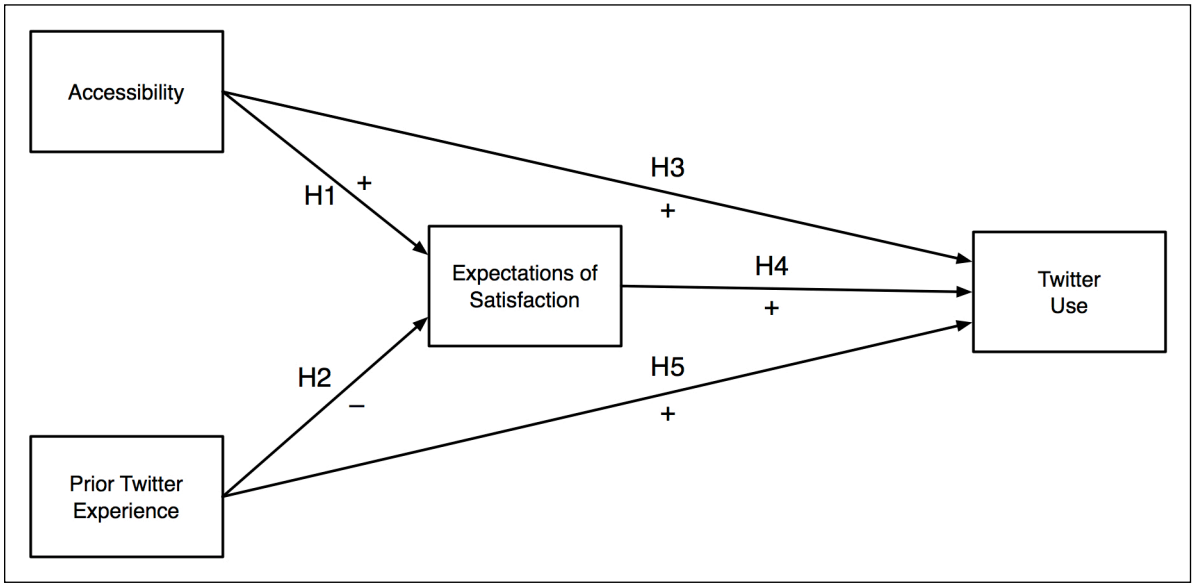

Figure 2. A uses and gratifications model of Twitter.

While the model proposed in this study is informed by McLeod and Becker's (1981) model, there are several important differences in assumptions. The new model assumes a differentiation between individual perceptions of gratifications sought and actual gratifications obtained, as previous studies involving expectancy-value theory have shown (Palmgreen & Rayburn, 1985; Rayburn & Palmgreen, 1984). Furthermore, although an individual's background, basic needs, and social situation may indeed influence motivations, it is not the purpose of this study to investigate these concepts. Instead, emphasis is placed on the extent to which accessibility and prior Twitter experience influences expectations of satisfaction, and the extent to which these three variables (accessibility, prior experience, and expectations of satisfaction) ultimately influence Twitter use.

The proposed model is also specific to Twitter (media) use behaviors. McLeod and Becker's model includes both media and non-media use behaviors. The aim of this study is not to compare media use and non-media use behaviors. Rather, the focus is on Twitter behaviors.

By placing this constraint on the model, an individual's background, basic needs, and social situation are less important. These assumptions and related hypotheses are explained further in the next chapter.

Chapter 2: Theory

To investigate Twitter from a usage and gratifications perspective, four main bodies of literature are discussed. The first section discusses mass media and the internet as a medium of multiple mass media. The second introduces micro-blogging and Twitter. The third reviews uses and gratifications research, including a discussion of gratifications sought and gratifications obtained. The fourth section reviews uses and gratifications research specific to the internet, including a discussion of user expectations of satisfaction, accessibility, and prior experience. A final section introduces the hypotheses in the proposed uses and gratifications model of Twitter shown in Figure 2, along with a discussion of each.

Mass Media and the Internet as a Medium of Multiple Mass Media

Mass media are the mediating technologies, such as radio and television, through which mass communication reaches an active audience. A fundamental aspect of mass media is *mass communication*, defined as the mass distribution of messages to an audience (Abercrombie & Longhurst, 2007).

Morris and Ogan (1996) conceptualized the internet as one mass medium within the context of other mass media—but is the internet a single mass medium? After all, the internet offers access to many other forms of media, including much of the same content offered by traditional mass media. *The New York Times* online duplicates its print edition on the web (as do most newspapers), and many television programs can be viewed on the corresponding network or cable channel web site, and radio stations broadcast live through the web.

So what exactly *is* the internet in the context of mass media? Is it a single mass medium or is it multiple media? Morris and Ogan's (1996) conceptualization of the internet as a single mass medium includes four categories representing different communication relationships

among content producers and consuming audiences on the internet: (a) one-to-one asynchronous communication (e.g., email); (b) many-to-many asynchronous communication (e.g., message boards and email lists); (c) synchronous communication that can be one-to-one, one-to-few, or one-to-many (e.g., chat rooms); and (d) asynchronous communication characterized by the receiver's information-seeking behaviors (e.g., Google and Wikipedia).

However, conceptualizing the internet as a single mass medium falls short of what it is at a basic level. Abercrombie and Longhurst (2007) define the internet as a "method of connecting together computer networks; a network of networks … [that] permits email, chat rooms, bulletin boards and the world wide web" to operate and coexist (p. 187). Klopfenstein (2002) singled out the web as the driving force behind the growth of the internet, but the web—like the internet itself—is a platform upon which other media are built. Similarly, it is possible to conceptualize television as a form of multiple media. The television in its simplest form (i.e., an electronic box with audio speakers and a screen capable of displaying video) was a starting point for the transformation of the medium into the digital platform it is today, upon which other forms of mass media are built, such as pay-per-view and on-demand movies, hundreds of video and music channels, and digital video recorders, which provide audience members the ability to pause live television broadcasts and save programs to built-in hard drives.

In this study, the internet is conceptualized as a medium of *multiple* mass media. It is a medium that allows for a wide range of media to coexist and a multitude of ways to communicate via the same interconnected, global network infrastructure. Email was the first widely used medium on the internet. This was followed by the web, which was originally created to fulfill a need for individuals to share documents with each other in a networked environment (Klopfenstein, 2002). Soon after came instant messaging, blogs, iTunes for music, social media

and networking sites like Facebook and LinkedIn, and YouTube for sharing videos. If we treat these as differentiated forms of mass media, one commonality is they were built using the technological capabilities of the internet, often combining with or using previous forms of internet media. For example, an application on my mobile phone that allows me to scroll through blog headlines is built using information pulled from blogs; blogs are built using the web's content-delivery resources; and the web is built on the internet's "network of networks." In this way, the internet is not only a network of networks, but also a network of multiple mass media.

Twitter, often described as a micro-blog, is yet another medium built using internet technologies, but it is also unique in terms of how it facilitates both mass and interpersonal communication behaviors, described in more detail below.

Micro-blogging with Twitter

The micro-blog Twitter, which launched in October 2006 (Williams, 2007), describes itself as "a service for friends, family, and coworkers, to communicate and stay connected through the exchange of quick, frequent answers to the simple question: What are you doing?" (Twitter, 2007, para. 1). In August 2008 Twitter had over 1.2 million users (TwitDir, 2008), and its web site had over 2.2 million unique visitors—each visitor counted only once (Compete, 2008).

Twitter updates, or messages, appear on Twitter's home page, and all users' Twitter updates are publicly available, unless a user designates their messages as private or a message is sent privately to another user. The public history of Twitter updates is searchable using Twitter's own search engine.[3]

[3] http://search.twitter.com

A limit of 140 characters helps facilitate the use of sending text message updates to Twitter from a mobile phone. The *short message service* (SMS) used by mobile phones restricts text messages to 140 characters ("Short message service," 2008). Twitter updates can be sent using mobile phone text messaging, from Twitter's mobile phone web site,[4] from a user's Twitter home page, or from one of the many desktop and mobile applications that connect directly to Twitter (Twitter, 2007).

Users select the Twitter users that they wish to receive updates from, which is known as "following" another user. Updates received from followed Twitter users are accessed using the same variety of interfaces used to send updates (e.g., a mobile phone, Twitter's web page, or mobile and desktop applications). Users can choose to receive updates from certain users instantly as text messages sent to their mobile phone. For example, I may follow hundreds of Twitter users, but select only a few close friends, colleagues, or news organizations whose updates are sent directly as text messages.

Twitter users can have public conversations with others using *@replies*. Sent in the format *"@username message*," these messages are sent to a particular user and also viewable by others. Twitter users can also have private conversations with others via *direct messages*, sent in the format "*D username message*." Direct messages are private and seen only by the sender and receiver.

While Twitter describes itself as a service asking users to answer the question, "What are you doing?" by sending short updates, Twitter is often used in other ways and not limited to text-only messages. For example, many users send web links, typically with a brief message, comment, or title describing the link. This link-with-message combination can be longer than

[4] http://m.twitter.com

Twitter's restriction of 140 characters as Twitter automatically recognizes links and shrinks them down to 25 characters before the full update is posted. For example, if I wanted to post "Michael Phelps wins 8th gold medal at the Olympics and broke record. What an inspiration! http://www.nytimes.com/2008/08/17/sports/olympics/17swim.html," it would be 11 characters over Twitter's 140 character limit. Twitter takes care of this by recognizing the link and shortens it to read, "Michael Phelps wins 8th gold medal at the Olympics and broke record. What an inspiration: http://tinyurl.com/6je933," which is only 115 characters long.

While individual Twitter users can share links with others by sending them to Twitter with a brief message, many mass media organizations do the same. For instance, *The New York Times* has a Twitter account with over 300,000 followers,[5] as does *CNN* with over 500,000 followers,[6] and *BBC News* with just under 50,000 followers.[7] Each organization's Twitter account is commonly used to post updates with links to the latest news articles, thus becoming a live news feed or personal news wire service. A breaking news story posted to Twitter has the potential of reaching hundreds of thousands of people *instantly* via a mobile phone text message. In addition, some politicians have Twitter accounts and use them to post links and messages to their followers. Barack Obama has nearly 500,000 followers,[8] while Hillary Clinton has just over 8,500.[9]

Uses and Gratifications

In uses and gratifications studies, audience members "are not passive recipients of or reactors to media stimuli; rather they are purposive and conscious selectors of messages that

[5] http://twitter.com/nytimes
[6] http://twitter.com/cnnbrk
[7] http://twitter.com/bbcbreaking
[8] http://twitter.com/barackobama
[9] http://twitter.com/hillaryclinton

fulfill personal needs (such as 'keeping in touch with important events' or 'escape from boredom')" (Meyrowitz, 2002, p. 101). Palmgreen, Wenner, and Rosengren (1985) posit that "the social psychological origins of needs, values, and beliefs," combined with feedback from past experiences, influence motivations for media use and non-media use behaviors (p. 16). The uses and gratifications approach helps scholars better understand both how and why audience members use media.

Katz, Blumer, and Gurevitch (1974) point out that uses and gratifications research of the mass media is interested in:

> (1) the social and psychological origins of (2) needs, which generate (3) expectations of (4) the mass media or other sources, which lead to (5) differential patterns of media exposure (or engagement in other activities), resulting in (6) need gratifications and (7) other consequences, perhaps mostly unintended ones. (p. 20)

The goal of uses and gratifications research is the exploration of the extent to which the media fulfill and create human needs, and the investigation of the "extent to which certain kinds of media and content favor certain kinds of use" (p. 30).

McLeod and Becker's (1981) uses and gratifications model (see Figure 1) separates motives for certain behaviors from basic needs. They define *motives* conceptually as "expressed desires for gratification in a given class of situations" (p. 74), and operationally as gratifications sought. *Basic needs*, they claim, should be seen as antecedent to motives as they are rooted in psychology and physiology, and are therefore more internalized and less easy to measure by self-report than motives. With the separation of motives from basic needs, the expression of gratifications sought by an individual in a given situation is "more amenable to conscious awareness, more focused and directed to some behavioral resolution, more problem-oriented, and

more specific to the situation" (p. 74). In addition to basic needs, an individual's social situation and background are antecedent variables in their model.

Gratifications sought and gratifications obtained. Past uses and gratifications research has differentiated gratifications into gratifications *sought* and gratifications *obtained* (Palmgreen, et al., 1980; Rayburn & Palmgreen, 1984). This study recognizes the conceptual differences between the two. *Gratifications sought* are defined as motivations or "expressed desires for gratification" in media use situations (McLeod & Becker, 1981, p. 74), and *gratifications obtained* are defined as the "perceived personal outcomes" of media use (Rubin, et al., 1994, p. 173). Because gratifications sought are not always what individuals obtain (Palmgreen, et al., 1980), gratifications sought often change over time in relation to actual gratifications obtained (Palmgreen, et al., 1985).

Uses and Gratifications Meets the Internet

Morris & Ogan (1996) state that the internet is a "multifaceted mass medium" and "its varied forms show the connection between interpersonal and mass communication" (para. 11). Along with other scholars (Newhagen & Rafaeli, 1996; Ruggiero, 2000), they proposed that the uses and gratifications approach is a useful framework for internet research. Thus, early uses and gratifications research opened the door for new ways of looking at the internet as a mass medium, with components of both mass and interpersonal communication.

Uses and gratifications assumes an active and goal-oriented audience (Baran & Davis, 2006), and internet users are more active than users of any other mass medium. This feeds into the assumption that there is a difference between the number of gratifications sought and obtained for the internet and other media. Radio, for example, limits listening choices to a single music or news station at a time. The internet, as a medium of multiple media, can be specifically

tailored to the information-seeking and communication behavior needs of individuals. Internet users can surf the web, watch videos, read news and blogs, send emails, and so on. Individuals are not as restricted in their internet usage behaviors as they are with other media. But while more options are available, the internet is still in competition with other media to fulfill audience needs.

In an exploratory study of the uses of CompuServe and Prodigy—two popular internet bulletin board services in the early 90s—James, Wotring, and Forrest (1995) found that *information/education*, *socialization*, and *communication medium appeal* were the motivations most reported by users. Lin (1999) found that television-viewing motivations used in previous research (*entertainment*, *surveillance*, and *escape/companionship/identity*) were able to help explain the adoption and use of various online services, such as shopping services, information services, and infotainment services.

Charney and Greenberg (2002) found that *keeping informed* was the strongest motivator for intenet use, explaining 39% of the variance. This factor included items such as obtaining information about the world, news, technology, and products or services. *Diversion-entertainment* was the second strongest motivator, but explaining only 7% of the variance. This included items like passing time, boredom, to have fun and to play. Other factors included *peer identity*, *good feelings*, *sights and sounds*, *career*, and *coolness*. Similarly, Papacharissi and Rubin (2000) found five motives for internet use: *interpersonal utility, pass time, information seeking, convenience*, and *entertainment.*

Social gratifications. Stafford and colleagues (2004) pointed out that the two traditional categories of gratifications—content gratifications and process gratifications—were insufficient for the internet as it is vastly different from other media. *Content gratifications* include

education, information, knowledge, learning, and research as gratifications sought by internet users. *Process gratifications* include resources, search engines, searching, surfing, technology, and web sites. Relevant to the internet's interactive and social characteristics, the authors proposed a third type of motivation—*social gratifications*, such as interacting and communicating with friends and others.

In advertising research, Ko, Cho, & Roberts (2005) found that social interaction, along with information and convenience motives, were significant predictors of how long a person spent accessing a web site. *Social interaction* is when two or more individuals communicate with each other to achieve personal and shared goals (Bagozzi, Dholakia, & Mookerjee, 2006)

Furthermore, internet users have come to *expect* that the internet satisfy their social needs (Cho & Lee, 2008). According to Caplan (2003), these expectations for social interaction are able to help explain internet use. Thus, social gratifications are an important aspect of understanding internet use motives (Stafford, et al., 2004). For example, individuals often send emails with the expectation of receiving a response, and therefore anticipate a certain degree of social interaction.

Caplan (2003) points out that internet users' preference for "social interaction is a cognitive individual-difference construct characterized by beliefs that one is safer, more efficacious, more confident, and more comfortable with online interpersonal interactions and relationships that with traditional [face-to-face] social activities" (p. 629). He found that certain individuals with psychosocial distress (e.g., loneliness and depression) perceive social interaction on the internet as "less threatening and more rewarding than ordinary [face-to-face] interaction" (p. 638). Furthermore, his study, which looked at the relationship of social interaction with

psychosocial health and problematic internet use, found that social interaction acts as a mediator between the two.

According to Morris and Ogan (1996), interactivity is dynamic and increases or decreases depending on the internet medium. In this way, different mass media on the internet allow for varying degrees of social interactivity to occur—such as commenting on a blog post or responding to Twitter messages. Ha and James (1998) defined *interactivity* as the extent to which senders and receivers of messages respond to each other. In the context of social internet behaviors, interactivity implies content or message *contingency*—that "subsequent messages are contingent or dependent on previous messages" (Sundar, Kalyanaraman, & Brown, 2003, p. 35).

Many internet audience members go online simply to be entertained and gratify their social needs (Johnson & Kaye, 2003). For example, Kaye and Johnson (2004) found that entertainment and social needs were the strongest motives for the use of bulletin boards and mailing lists, which allow for greater social interactivity than static web pages used for informational purposes only, such as an organization's home page. The potential for both entertainment and social interactivity provided by these and other internet media (e.g., Twitter, Facebook, and YouTube) support the claim by Vorderer, Knobloch, and Schramm (2001) that the combination of entertainment with interactivity is "more attractive than regular entertainment if the right audience is addressed" (p. 361).

In a case study of YouTube, Chen (2008, May) found that social interaction (e.g., sending links) and personal fulfillment (e.g., entertainment) are strong motivators for consuming YouTube videos. YouTube users watch and recommend videos to others largely because YouTube videos are entertaining. Entertainment is also one of the same reasons why people watch television (Johnson & Kaye, 2003).

Other internet uses and gratifications studies have taken a social-cognitive approach to understand internet use. LaRose et al. (2001) conceptualized gratifications as *outcome expectations*, defined by Bandura (1997) as individual judgments of likely consequences of certain behaviors:

> The outcome expectancy construct parsimoniously bridges the gulf between gratifications sought and gratifications obtained in uses and gratifications research. Outcome expectations reflect current beliefs about the outcomes of prospective future behavior but are predicted on comparisons between incentives expected and incentives attained in the past. (LaRose, et al., 2001, p. 399)

LaRose and colleagues (2001) found that expectations of *activity outcomes*, *pleasing sensory outcomes*, *novel sensory outcomes*, and *social outcomes* were all positively related to internet use. They also found that *internet self-efficacy* and *perceived addiction* were positively related to internet use, while *self-disparagement* and *self-slighting* were negatively related to internet use.

Although outcome expectations seems to bridge the gap between gratifications sought and gratifications obtained, other studies have not found support of outcome expectations in explaining media use (Peters, 2008; Peters, et al., 2006). Therefore, this study returns to a traditional gratifications sought-gratifications obtained approach, and uses expectations of satisfaction to bridge the gap between the two, similar to McLeod and Becker's (1981) model, which is discussed below.

Expectations of satisfaction. A study by Palmgreen, Wenner, and Rayburn (1980) conceptualizes the differences between gratifications sought and gratifications obtained in uses and gratifications research. Similar studies applied expectancy-value theory to further make this

distinction (Dobos, 1992; Palmgreen & Rayburn, 1985; Rayburn & Palmgreen, 1984). Expectancy-value theory views behavior, intentions, and attitudes as a "function of (1) expectancy (or belief—that is, the perceived probability that an object possesses a particular attribute or that a behavior will have a particular consequence; and (2) evaluation—that is, the degree of affect, positive or negative, toward an attribute or behavioral outcome" (Palmgreen & Rayburn, 1985, p. 62).

According to McLeod and Becker's (1981) uses and gratifications model, individuals assess their past behaviors (both media and non-media use) and the odds that certain behaviors will actually satisfy their motivations before selection. In other words, the satisfaction of an individual's motivations are positively related to future internet usage (Hwang, 2005; Papacharissi & Rubin, 2000; Peng, 2003). If the odds are that certain motivations are not expected to be satisfied by a medium, individuals are more likely to seek out alternative media and non-media use behaviors (Rosengren & Windahl, 1972).

For example, if an individual knows from past experiences that sitting around a computer with friends to watch YouTube videos satisfies a need to be entertained in a social setting, they are more likely to repeat the behavior to fulfill the same need in the future. However, if the same individual expects that watching a game on television with friends at a sports bar has greater odds of satisfying the need, they may go to the sports bar if given the option. In other words, if a game is playing at a sports bar, an individual will choose to go there with friends to satisfy their need. If no game is playing at a sports bar, they may choose to stay home and watch YouTube videos together.

Accessibility. Also shown in Figure 1, the selection of one behavior over another is dependent on the availability of media and non-media behaviors (McLeod & Becker, 1981). In

terms of an internet medium like Twitter, accessibility is used to describe the extent to which Twitter makes it easy to satisfy possible motivations for using Twitter, as well as the availability of usage behaviors or ways that Twitter is accessed by an individual (e.g., mobile phone application, computer web browser). Accessibility also refers to the extent that Twitter usage behaviors are more available and easier to use compared with other media. For example, Twitter is more available and easier to use than YouTube is via mobile phone text messaging—YouTube simply cannot be accessed through a text message.

The growth in the number of internet users accessing the internet on their mobile phones for news and information has more than doubled from January 2008 to January 2009, and 35% access the internet daily on their mobile phones (comScore, 2009). According to Nielsen Online (2009), much of this growth is due to the use of mobile phones to access social media and networking sites:

> Mobile is a natural fit for social networks, as consumers are used to connecting with friends via mobile calls and text. Using the phone to access social networks doesn't require much change in consumer mindset. (p. 12)

The Nielsen Online report also states that users access social media and networking sites on their mobile phone in three ways: (a) by browsing the mobile Web; (b) through downloaded applications; and (c) by text messaging. Status updates are sent to Facebook or Twitter via text messaging, which makes using these social media highly accessible to anyone with a mobile phone. Specific to Facebook, Nielsen Online "estimated that almost 3 million U.S. mobile users were texting Facebook on a regular basis" in 2008 (p. 12).

A study by Kinnally, Lacayo, McClung, and Sapolsky (2008) investigated college students' motivations for downloading music online and found that convenience/economic utility

accounted for 9% of the variance, reflecting the "respondents' interest in the immediacy and accessibility of acquiring music via the web as well as the cost benefit" (p. 906). In other words, the study shows how a specific internet media use behavior is influenced by convenience, or accessibility.

In technology acceptance research, such as the *technology acceptance model* (TAM) by Davis (1989), both perceived usefulness and perceived ease of use are predictors of technology acceptance. *Perceived usefulness* is the degree to which an individual thinks that using a technology will "enhance his or her job performance" or task at hand (Venkatesh & Davis, 2000, p. 187). *Perceived ease of use* is the "extent to which a person believes that using [a] system will be free of effort" (p. 187). Perceived ease of use is comparable to McLeod and Becker's notion of availability of media and non-media use behaviors, as "the selection of a given option … is constrained by the availability of the various options (such as cost of ease of use)" (p. 74).

While most internet media require web browsing software to access the content available on their web pages, Twitter uses an open and free-to-use application programming interface (API) to provide a stream of content and a data platform for software developers to use and build on. An *application programming interface* (API) is defined as a computer programming "language that enables communication between computer programs" ("application programming interface," 2008). Klaassen (2008) defines an API as a "doorway through which developers can access someone else's data or content, mix it up in a new way, and deliver it to users" (para. 1). If I were to create a desktop or web application to use Twitter, its API would allow me to access Twitter's content and use it however I wanted in my application. Without it, Twitter use would be more difficult for software developers to create applications and alternative ways to access

Twitter other than via its web interface. All non-private content on Twitter is therefore available to be used in any type of software—web, desktop, or mobile phone-based.

What the API means for Twitter is that Twitter's content can be accessed through a web browser, mobile text messaging, or any mobile or desktop application designed to access the API and Twitter's content. Software programmers have built a wide range of tools to access Twitter—from desktop and mobile phone applications to various types of web sites that use Twitter's data and content in new and interesting ways. Several thousand desktop and mobile applications and web sites have been built for Twitter using its API, which makes Twitter easily accessible to nearly anyone with a computer and internet connection or a mobile phone.

Prior experience. Prior experience increases individual expectations of social and information gratifications, as well as internet use behaviors and internet self-efficacy (Eastin & LaRose, 2000; LaRose & Eastin, 2004). *Internet self-efficacy* is "what a person believes he or she can accomplish online now or in the future" (Eastin & LaRose, 2000, para. 4). A study by Kaye and Johnson (2004) found that a greater number of online activities that internet users perform was positively associated with motivations for using the internet.

Kaye and Johnson also found that the number of years individuals have been using the internet positively predicts internet use. However, number of years individuals have been using the internet was negatively related to actual motivations for using the internet. LaRose and Eastin (2004) found similar results—correlations between expectations and internet use were higher for people who have been using the internet for less than three years. This points to the possibility that expectations decrease after a period of time when users' familiarity is so high that usage becomes habitually internalized along with expectations that "had become dormant with repetition" (p. 372).

Hypotheses

Overall, Twitter users' gratifications sought and obtained have an impact on Twitter use—media users' behaviors are purposive and fueled by motivations to satisfy particular needs (Katz, et al., 1974; Meyrowitz, 2002). This study explores gratifications sought and obtained by individuals who use Twitter, as well as prior experience, accessibility, and Twitter use. Expectations of satisfaction—the differentiation between gratifications sought and the gratifications that users actually obtain—are also explored, which influence Twitter use. The more that Twitter actually helps users satisfy their needs, the more they will use Twitter. The hypotheses outlined in Figure 2 are described below.

Kinnally and colleagues (2008) found that convenience, or accessibility, influenced college students' motivations to download music via the web. In this study, it is anticipated that Twitter users' expectations of satisfaction (i.e., that Twitter will fulfill their needs) increase if they perceive Twitter to be more accessible. Also, prior Twitter experience can decrease expectations of satisfaction in that the longer an individual has been a Twitter user increases their familiarity with Twitter, which in turn internalizes and lessens expectations due to repeated use—users no longer think about what to expect once usage becomes a habit (Kaye & Johnson, 2004; LaRose & Eastin, 2004). Furthermore, Twitter use is not restricted to its web interface. It can be accessed in multiple ways, such as via a web browser, desktop and mobile applications, mobile text messaging, instant messaging, and others (WMExperts, 2008). No matter how Twitter is accessed, all messages are available and appear in the same fashion across devices or applications. If Twitter users perceive Twitter to be highly accessible and easy to use in satisfying certain gratifications sought, they are more likely to perceive that Twitter actually

gratifies their needs, thus increasing expectations of satisfaction. In other words, if Twitter is not easy to use it is less likely that Twitter will actually help users satisfy their needs.

H1: Accessibility is positively related to expectations of satisfaction.

H2: Prior Twitter experience is negatively related to expectations of satisfaction.

H3: Accessibility is positively related to Twitter use.

Expectations influence gratifications sought (Rubin, et al., 1994), and motivations leading to subsequent behaviors are based on an individual's personal beliefs or an assessment of the odds that a behavior will satisfy a particular need (McLeod & Becker, 1981; Palmgreen & Rayburn, 1985; Rayburn & Palmgreen, 1984). Thus, users assess the odds that a behavior will satisfy a need, and they expect a certain degree of satisfaction based on past experiences. If a user's gratifications sought are actually obtained by using Twitter, it is likely they will use Twitter more. Additionally, studies have found that prior internet experience increases internet use behaviors (Eastin & LaRose, 2000; LaRose & Eastin, 2004). Among Twitter users, it is likely that the more prior Twitter experience an individual has, the more they will use Twitter.

H4: Expectations of satisfaction are positively related to Twitter use.

H5: Prior Twitter experience is positively related to Twitter use.

H6: The proposed model in Figure 2 is supported by the data.

Chapter 3: Methods

A total of 242 Twitter users completed a self-administered online questionnaire. A convenience sample of Twitter users was taken using snowball sampling. An update was posted to Twitter with a link to the questionnaire asking users to participate in a Twitter usage study. The update asked users to "retweet" or share the same message with their Twitter followers. Several Twitter users with a large number of followers were sent a private direct message asking to post an update sharing the link to the questionnaire. In addition, the last page of the questionnaire contained a link that, when clicked, brought the participant to their Twitter update page and automatically entered the same message and link into their update entry box to share the questionnaire with their followers. Although the last page of the questionnaire asked participants to click the link to share the questionnaire, this step was not required. It was also up to each participant to decide whether to actually post the update. A total of 110 Twitter users "retweeted" the link. The questionnaire collected data during the last week of January 2009, with the majority of data collected within a 48-hour time period.

Instrument Design

The questionnaire contained gratifications sought and gratifications obtained measurement items derived from previous internet uses and gratifications research (Charney & Greenberg, 2002; Eastin & LaRose, 2000; Hwang, 2005; Ko, et al., 2005; Nyland, 2007; Peters, et al., 2006; Rayburn & Palmgreen, 1984). The questionnaire also contained measurement items regarding prior Twitter experience, accessibility, Twitter use, and demographics.

Prior Twitter experience. To measure prior Twitter experience (Cronbach's $\alpha = .88$), participants were asked to report (a) how familiar they are with Twitter on a 7-point scale; (b) how long ago they signed up for a Twitter account (in months); (c) how many of those months

they have been actively reading others' Twitter updates; and (d) how many of these months they have been actively posting updates to Twitter.

Twitter use. To measure Twitter use, participants were be asked to report (a) how many days a week they use Twitter; (b) how many times a day they access Twitter (frequency); and (c) on the days they use Twitter, how much time they spend using Twitter in hours and minutes.

Gratifications sought. To measure gratifications sought (Cronbach's $\alpha = .77$), participants were provided with a list of 15 reasons for using Twitter and asked to rate their level of disagreement or agreement with each item on a 5-point scale for why they use Twitter (from "strongly disagree" to "strongly agree). The 15 items were presented in a random order for each participant:

1. To express myself freely.
2. To communicate more easily.
3. To have fun.
4. To learn interesting things.
5. To give or receive advice.
6. To meet new people.
7. To keep in touch with friends or family.
8. To share information with others (facts, links, news, knowledge, ideas).
9. To be entertained.
10. To see what others are up to.
11. To relax.
12. To participate in discussions.
13. To get information (facts, links, news, knowledge, ideas).

14. To pass the time.

15. To communicate with many people at the same time.

Accessibility. To measure accessibility (Cronbach's $\alpha = .83$), participants were asked to rate their level of disagreement or agreement in response to six statements on a 5-point scale. The first four statements were modified from technology acceptance studies (Davis, 1989; Venkatesh & Davis, 2000). The last two statements were added and deemed relevant to the operationalization of accessibility:

1. Using Twitter is clear and understandable.
2. Twitter is easy to use.
3. Using Twitter does not require a lot of mental effort.
4. It is easy to get Twitter to do what I want it to do.
5. It is convenient to use Twitter.
6. Twitter is accessible.

Gratifications obtained. To measure gratifications obtained (Cronbach's $\alpha = .81$), participants were provided with the same list of 15 reasons for using Twitter and asked to rate their level of disagreement or agreement with each item on a 5-point scale according to how well Twitter *actually* helps them with each item (from "strongly disagree" to "strongly agree"). The 15 items were presented in a random order for each participant. Rayburn and Palmgreen's (1984) rewording approach was taken to have participants rate a nearly identical list of items from gratifications sought in order to measure a different concept:

1. Express myself freely.
2. Communicate more easily.
3. Have fun.

4. Learn interesting things.
5. Give or receive advice.
6. Meet new people.
7. Keep in touch with friends or family.
8. Share information with others (facts, links, news, knowledge, ideas).
9. Be entertained.
10. See what others are up to.
11. Relax.
12. Participate in discussions.
13. Get information (facts, links, news, knowledge, ideas).
14. Pass the time.
15. Communicate with many people at the same time.

Expectations of satisfaction. To measure expectations of satisfaction (ES), the mean differences between gratifications obtained (GO) and gratifications sought (GS) were calculated for each of the two factors (F1, F2) that emerged from multivariate factor analysis described in the following chapter. The following formula was used to calculate expectations of satisfaction:

$$ES = (GOF1 - GSF1) + (GOF2 - GSF2)$$

Chapter 4: Results

A total of 242 Twitter users completed the online questionnaire. Over 90% of participants lived in the United States, and others lived in Canada, the United Kingdom, and Australia. Nearly a quarter of participants worked in education, and a sixth in marketing, market research, or public relations. Over a fifth of participants were students. As shown in Table 1, the average participant was highly educated with a professional degree or higher. The average household income was $50,000 to $99,999. The age of respondents ranged from 19 to 90 years, with an average of nearly 33 years of age. Most used Twitter at least six days per week, with an average of over 12 hours per week. Frequency of Twitter use averaged at nearly 200 times per week.

Table 1 also shows the means and standard deviations for accessibility and prior experience variables. Overall, users perceived Twitter to be very accessible, and users' familiarity with Twitter was high. The average length of time in months since users signed up for an account was a little over nine and a half months. However, the actual length of time in months spent using Twitter to either read others' updates or post their own updates was shorter—by about two months.

Table 1. Means and standard deviations for accessibility, prior Twitter experience, Twitter use, and demographic variables.

Variables	*Mean*	*SD*	*N*
Accessibility*			
— Using Twitter is clear and understandable.	4.01	0.86	241
— Twitter is easy to use.	4.32	0.66	241
— It is convenient to use Twitter.	4.33	0.62	241
— Twitter is accessible.	4.29	0.66	240
— Using Twitter does not require a lot of mental effort.	3.87	0.97	239
— It is easy to get Twitter to do what I want it to do.	3.89	0.80	241
Prior Twitter experience*			
— How familiar are you with Twitter?**	6.07	1.10	242
— How long ago did you sign up for a Twitter account (in months)?	9.65	7.22	242
— How many of these months have you been actively reading others' Twitter updates?	7.99	6.78	242
— How many of these months have you been actively posting updates to Twitter?	7.80	6.66	242
Twitter use			
— On average, how many days a week do you use Twitter?	6.13	1.21	239
— Hours per week (hours per day X days per week)	12.46	17.74	239
— Frequency per week (times per day X days per week)	190.42	545.44	234
Demographics			
— Age (in years)	32.78	10.79	240
— Education (highest level completed)***	6.26	1.34	239
— Income (household)****	2.13	1.14	232

* Responses were coded 5 = *strongly agree*, 4 = *agree*, 3 = *neither*, 2 = *disagree*, 1 = *strongly disagree.*

** Responses were coded on a 7-point scale from 1 = *not at all familiar* to 7 = *very familiar.*

*** 1 = high school/secondary school graduate or equivalent; 2 = some college; 3 = associate degree; 4 = Bachelor's degree; 5 = Master's degree; 6 = professional school degree (MD, LLB, JD, DDS, DVM); 7 = doctorate (PhD, EdD, DrPH).

**** 1 = $49,999 or under; 2 = $50,000 to 99,999; 3 = $100,000 to 149,999; 4 = $150,000 to 199,999; 5 = $200,000 or more.

Differentiations Between Gratifications Sought and Obtained

Table 2 shows the correlated *t* tests comparing mean differences between gratifications sought and gratifications obtained for each item. Of the 15 measurement items, seven had statistically significant mean differences between gratifications sought and obtained. The two largest differences were almost equal, but in opposite polar directions. The first, pass the time, had a 4.8% increase from gratifications sought to obtained, indicating that Twitter *actually helps* users fulfill the need to pass the time more than they are *motivated* to use Twitter for that purpose. The second, have fun, was just the opposite with a 4.8% decrease, indicating that although users are motivated to use Twitter to have fun, Twitter is *actually less helpful* in fulfilling this particular need. This was the only gratifications sought item that was greater than its gratifications obtained counterpart. The remaining five items all showed significant increases in gratifications obtained: meet new people (4.3%), communicate with many people at the same time (3.6%); participate in discussions (2.3%); express myself freely (2.2%); and see what others are up to (1.9%).

Bivariate Analysis

As shown in Table 3, accessibility positively correlates with expectations of satisfaction, thus supporting hypothesis H1. Prior Twitter experience did not significantly correlate with expectations of satisfaction. Bivariate analysis does not support hypothesis H2. All three independent variables of Twitter use—accessibility, expectations of satisfaction, and prior Twitter experience—did not significantly correlate with either operationalizations of Twitter use—hours of use per week or frequency of use per week, therefore not supporting hypotheses H3, H4, and H5.

Table 2. Correlated *t* tests for gratifications sought (GS) and gratifications obtained (GO) variables.

Variables		*Mean*	*SD*	*t value*	*df*	*Significance*
Have fun.	GS	**3.97**	.84			
—	GO	**3.73**	.88	5.17	234	$p < .001$
Pass the time.	GS	**3.32**	1.20			
—	GO	**3.57**	1.10	-4.16	236	$p < .001$
Meet new people.	GS	**3.46**	1.24			
—	GO	**3.67**	1.15	-4.53	235	$p < .001$
Communicate with many people at the same time.	GS	**4.04**	.91			
—	GO	**4.22**	.70	-3.54	237	$p < .001$
Participate in discussions.	GS	**3.72**	.98			
—	GO	**3.84**	.91	-2.35	235	$p < .05$
Express myself freely.	GS	**3.42**	1.13			
—	GO	**3.53**	1.04	-2.03	237	$P < .05$
See what others are up to.	GS	**4.22**	.77			
—	GO	**4.31**	.66	-2.37	234	$p < .05$
Keep in touch with friends or family.	GS	3.39	1.26			
—	GO	3.41	1.18	-.33	236	*ns*
Give or receive advice.	GS	3.82	1.05			
—	GO	3.85	.88	-.72	235	*ns*
Be entertained.	GS	3.85	.96			
—	GO	3.87	.88	-.35	237	*ns*
Relax.	GS	2.82	1.11			
—	GO	2.90	1.06	-1.56	235	*ns*
Communicate more easily.	GS	3.82	.89			
—	GO	3.90	.83	-1.47	236	*ns*
Get information (facts, links, news, knowledge, ideas).	GS	4.38	.84			
—	GO	4.42	.60	-.73	238	*ns*
Share information with others (facts, links, news, knowledge, ideas).	GS	4.46	.63			
—	GO	4.46	.55	.00	237	*ns*
Learn interesting things.	GS	4.28	.80			
—	GO	4.29	.74	-.10	236	*ns*

* Responses were coded 5 = *strongly agree*, 4 = *agree*, 3 = *neither*, 2 = *disagree*, 1 = *strongly disagree.*

Note: GS = gratifications sought, GO = gratifications obtained.

Table 3. Pearson correlation coefficients for accessibility, prior Twitter experience, expectations of satisfaction, gratifications sought, gratifications obtained, Twitter use, and demographic variables.

Variables	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*
1. Accessibility*	.10 (237)	.14[a] (234)	.17[b] (234)	.08 (234)	.23[b] (236)	.18[b] (236)	.36[b] (234)	.25[b] (234)	.10 (234)	.03 (229)	-.06 (235)	-.13 (234)	.01 (227)
2. Prior Twitter experience*	—	.06 (239)	.04 (239)	.06 (239)	.08 (241)	.10 (241)	.11 (239)	.15[a] (239)	.12 (239)	.10 (234)	.21[b] (240)	.25[b] (239)	.26[b] (232)
3. Expectations of satisfaction (total)**		—	.86[b] (239)	.88[b] (239)	-.33[b] (239)	-.37[b] (239)	.22[b] (239)	.23[b] (239)	-.08 (236)	-.02 (231)	.05 (237)	.07 (237)	.09 (230)
4. Social expectations of satisfaction**			—	.51[b] (239)	-.39[b] (239)	-.18[b] (239)	.25[b] (239)	.16[a] (239)	-.07 (236)	-.04 (231)	.05 (237)	.04 (237)	.11 (230)
5. Information expectations of satisfaction**				—	-.20[b] (239)	-.45[b] (239)	.13 (239)	.23[b] (239)	-.07 (236)	.00 (231)	.03 (237)	.08 (237)	.05 (230)
6. GS Social***					—	.26[b] (241)	.80[b] (239)	.14[a] (239)	.11 (238)	.06 (233)	-.25[b] (239)	-.20[b] (238)	-.19[b] (231)
7. GS Information***						—	.15[a] (239)	.77[b] (239)	.26[b] (238)	.15[a] (233)	.09 (239)	-.08 (238)	.09 (231)
8. GO Social***							—	.25[b] (239)	.07 (236)	.03 (231)	-.23[b] (237)	-.18[b] (237)	-.13[a] (230)
9. GO Information***								—	.23[b] (236)	.16[a] (231)	.12 (237)	-.02 (237)	.14[a] (230)
10. Hours (per week)									—	.84[b] (234)	-.02 (237)	-.09 (236)	.03 (229)
11. Frequency (per week)										—	-.04 (233)	-.05 (232)	.03 (225)
12. Age (in years)											—	.34[b] (238)	.46[b] (231)
13. Education****												—	.17[b] (231)
14. Income*****													—

* Additive index.
** Calculated as the difference between gratifications obtained and sought.
*** Mean composite index.
**** 1 = high school/secondary school graduate or equivalent; 2 = some college; 3 = associate degree; 4 = Bachelor's degree; 5 = Master's degree; 6 = professional school degree (MD, LLB, JD, DDS, DVM); 7 = doctorate (PhD, EdD, DrPH).
***** 1 = $49,999 or under; 2 = $50,000 to 99,999; 3 = $100,000 to 149,999; 4 = $150,000 to 199,999; 5 = $200,000 or more.
a. $p < .05$
b. $p < .01$

Factor Analysis and Interpretation

Exploratory factor analysis was conducted to analyze intercorrelations among the 15 measurement items for gratifications sought and gratifications obtained. Although the traditional method for determining the number of factors relies on components with eigenvalues greater than one, an alternative scree test (Cattell, 1966) was also used in deciding which components to keep—factors that captured the most meaning, made sense, and were easy to describe (Wuensch, 2005).

As shown in Table 4, principal components factor analysis with varimax rotation of gratifications sought items found two factors—*social* (Cronbach's $\alpha = .78$) and *information* (Cronbach's $\alpha = .72$). Similarly, as shown in Table 5, principal components factor analysis with varimax rotation of gratifications obtained items found the same two factors—social (Cronbach's $\alpha = .80$) and information (Cronbach's $\alpha = .79$).

The first factor, social, accounted for 25.3% of the variance among the gratifications sought items ($M = 3.65$, $SD = .62$), and 28.8% of the variance among the gratifications obtained items ($M = 3.71$, $SD = .59$). The social factor included nine items for both gratifications sought and obtained: have fun; be entertained; relax; see what others are up to; pass the time; express myself freely; keep in touch with friends or family; communicate more easily; and communicate with many people at the same time.

Table 4. Factor analysis (principal components analysis and varimax rotation) of measures of gratifications sought, $N = 230$.

Variables	*M*	*SD*	*Factor 1 Social*	*Factor 2 Information*
To have fun.	3.96	.85	**.76**	.15
To be entertained.	3.84	.96	**.75**	.05
To relax.	2.82	1.11	**.67**	.09
To see what others are up to.	4.22	.77	**.64**	-.04
To pass the time.	3.31	1.21	**.58**	-.05
To express myself freely.	3.42	1.13	**.57**	.21
To keep in touch with friends or family.	3.38	1.25	**.56**	-.18
To communicate more easily.	3.82	.89	**.42**	.22
To communicate with many people at the same time.	4.03	.92	**.40**	.31
To get information (facts, links, news, knowledge, ideas).	4.38	.83	-.12	**.73**
To give or receive advice.	3.81	1.05	.00	**.69**
To learn interesting things.	4.28	.79	.09	**.66**
To meet new people.	3.45	1.24	.15	**.64**
To share information with others (facts, links, news, knowledge, ideas).	4.46	.63	-.03	**.61**
To participate in discussions.	3.72	.97	.27	**.57**
Eigenvalues			3.79	2.44
% of total variance accounted for			25.29	16.24

Note: Responses were coded 5 = *strongly agree*, 4 = *agree*, 3 = *neither*, 2 = *disagree*, 1 = *strongly disagree.*

Table 5. Factor analysis (principal components analysis and varimax rotation) of measures of gratifications obtained, $N = 229$.

Variables	*M*	*SD*	*Factor 1 Social*	*Factor 2 Information*
Be entertained.	3.87	.88	**.78**	.06
Have fun.	3.73	.86	**.76**	.08
Relax.	2.90	1.06	**.69**	.11
Pass the time.	3.56	1.10	**.68**	-.02
Keep in touch with friends or family.	3.41	1.18	**.61**	-.16
See what others are up to.	4.31	.66	**.60**	.10
Express myself freely.	3.53	1.04	**.57**	.22
Communicate more easily.	3.90	.83	**.47**	.32
Communicate with many people at the same time.	4.22	.70	**.36**	.30
Get information (facts, links, news, knowledge, ideas).	4.42	.60	-.02	**.76**
Learn interesting things.	4.29	.74	.14	**.76**
Give or receive advice.	3.86	.89	.06	**.72**
Participate in discussions.	3.84	.91	.20	**.68**
Meet new people.	3.68	1.14	.13	**.67**
Share information with others (facts, links, news, knowledge, ideas).	4.46	.55	-.04	**.66**
Eigenvalues			4.32	2.59
% of total variance accounted for			28.77	17.28

Note: Responses were coded 5 = *strongly agree*, 4 = *agree*, 3 = *neither*, 2 = *disagree*, 1 = *strongly disagree.*

The second factor, information, accounted for 16.2% of the variance among the gratifications sought items (M = 4.02, SD = .63), and 17.3% of the variance among the gratifications obtained items (M = 4.09, SD = .58). Information included six items for both gratifications sought and obtained: get information (facts, links, news, knowledge, ideas); give or receive advice; learn interesting things; meet new people; and share information with others (facts, links, news, knowledge, ideas).

Regression Analyses

Tables 6 and 7 show the results of hierarchical regression analysis in which Twitter use is predicted by four blocks of independent variables. Demographics (age, education, income) and accessibility were entered into the first block; prior Twitter experience into the second block; social gratifications sought and obtained in the third block; and information gratifications sought and obtained in the last block.

The dependent variable, Twitter use, is operationalized in two ways. The first is total hours per week. Table 6 shows that information gratifications sought and obtained significantly predicted total hours per week when controlling for demographics, accessibility, prior Twitter experience, and social gratifications sought and obtained. The model accounts for 9% of the variance in total hours per week. These results suggest that information is an important predictor of total hours per week using Twitter.

Table 6. Hierarchical regression analysis of demographic and accessibility variables, prior Twitter experience, social gratifications, and information gratifications on Twitter use (hours per week), $N = 224$.

Blocks of independent variables	*Std. beta*	*R^2 change*	*Total R^2*	*Adjusted R^2*
1. Age	-.02	.02	.02	.00
Education	-.10			
Income	.05			
Accessibility	.08			
2. Age	-.03	.01	.03	.01
Education	-.12			
Income	.03			
Accessibility	.07			
Prior Twitter experience	.13			
3. Age	-.02	.01	.04	.01
Education	-.12			
Income	.05			
Accessibility	.07			
Prior Twitter experience	.12			
Social GS	.14			
Social GO	-.09			
4. Age	-.05	**.05**[a]	**.09**[a]	**.06**[a]
Education	-.09			
Income	.03			
Accessibility	.04			
Prior Twitter experience	.12			
Social GS	.08			
Social GO	-.09			
Information GS	.17			
Information GO	.09			

a. $p < .05$

Table 7. Hierarchical regression analysis of demographic variables, accessibility, prior experience, social gratifications, and information gratifications on Twitter use (frequency per week), $N = 220$.

Blocks of independent variables	*Std. beta*	*R^2 change*	*Total R^2*	*Adjusted R^2*
1. Age	-.06	.01	.01	-.01
Education	-.04			
Income	.06			
Accessibility	.01			
2. Age	-.07	**.02**[a]	**.03**[a]	.00
Education	-.08			
Income	.04			
Accessibility	-.01			
Prior Twitter experience	**.14**[a]			
3. Age	-.06	.00	.03	-.01
Education	-.07			
Income	.05			
Accessibility	.00			
Prior Twitter experience	**.14**[a]			
Social GS	.08			
Social GO	-.06			
4. Age	-.09	**.03**[a]	**.05**[a]	**.01**[a]
Education	-.06			
Income	.03			
Accessibility	-.03			
Prior Twitter experience	.13			
Social GS	.09			
Social GO	-.12			
Information GS	.01			
Information GO	.17			

a. $p < .05$

The second way that Twitter use is operationalized is frequency per week. Table 7 shows that prior Twitter experience significantly predicted frequency per week when controlling for demographics and accessibility—the more prior experience a user has with Twitter, the more frequently they use it. In addition, Table 7 shows that information gratifications sought and obtained also significantly predicted frequency per week when controlling for demographics, accessibility, prior Twitter experience, and social gratifications sought and obtained. The model accounts for 5% of the variance in frequency per week. These results suggest that both prior Twitter experience and information are important predictors of frequency per week of using Twitter. Although the bivariate analysis did not support hypothesis H5—that prior Twitter experience is positively related to Twitter use—hierarchical regression analysis partially supports hypothesis H5.

Chapter 5: Discussion

This study applied a uses and gratifications approach to test a model of Twitter use, which was theoretically based on McLeod and Becker's (1981) model. An important aspect of the Twitter model is the use of expectations of satisfaction as a function of the differences between gratifications obtained and sought. Dobos (1992) explains the difference between the two:

> Gratifications sought, defined variously as needs, expectations, or motivations for media use, arise from and are shaped by individual characteristics and features of the social environment. Gratifications obtained or need gratifications, on the other hand, refer to the actual fulfillment of these media expectations by available alternatives. (p. 30)

Stemming from an earlier study investigating gratifications sought and obtained as separate (Palmgreen, et al., 1980), Rayburn and Palmgreen's (1984) expectancy-value model builds an even stronger case for differentiating the two concepts by measuring each on different levels of abstraction (i.e., measuring gratifications obtained on both a general level—television news—as well as a more specific level—favorite program). They state that any "discrepancies between gratifications sought and obtained may motivate changes in behavior to reduce the discrepancies," which is an important point to consider (p. 556). If gratifications sought and obtained affect use unequally, they must be measured as separate concepts. This differentiation strategy of comparing expectations to perceived results is not unique and is also found in consumer satisfaction literature (Cadotte, et al., 1987; Spreng, et al., 1996). For example, Spreng, et al. (1996) defined *expectations congruency* as "the consumer's subjective assessment of the comparison between his or her expectations and the performance received" (p. 18). This study conceptualized expectations of satisfaction as the gap between the differentiated concepts of

gratifications sought and obtained, which was applied to the Twitter model in this study to represent McLeod and Becker's definition of expectations—the assessment of the means of satisfaction by individuals to various behaviors.

The Twitter model also included accessibility to represent McLeod and Becker's conceptualization of availability of behaviors, as well as the addition of prior experience, which is common in uses and gratifications research (Eastin & LaRose, 2000; Kaye & Johnson, 2004; LaRose & Eastin, 2004). The two dependent variables in the Twitter model, expectations of satisfaction and Twitter use, are discussed below.

First, this study hypothesized that accessibility is positively related to expectations of satisfaction. Bivariate analysis supported this hypothesis. This is not surprising as many have noted that accessibility is one of the key contributors to Twitter's success (Middlebrook, 2007; Schonfeld, 2009). Looking back to McLeod and Becker, the actual availability of media use behaviors is directly related to expectations. Twitter is accessible from nearly anywhere—all you need is a computer with an internet connection or a mobile phone. Figure 3 is the percentages showing the type of interface used to access Twitter as of February 2009 (Volpe, 2009). Over half of users access Twitter by means other than the web site, such as desktop applications (21.8%), mobile phone (17.9%), and aggregation/automation and pictures (12.2%). Aggregation/automation and pictures includes web sites other than Twitter's web interface that use Twitter's API to access or post updates, such as twitterfeed.com[10], which automatically sends an update to Twitter whenever a twitterfeed user writes a new post on his or her blog. These automatic updates to Twitter typically contain a title and link to the blog post (e.g., "New blog post! – My trip to Europe: http://www.myblog.com/europetrip").

[10] http://www.twitterfeed.com

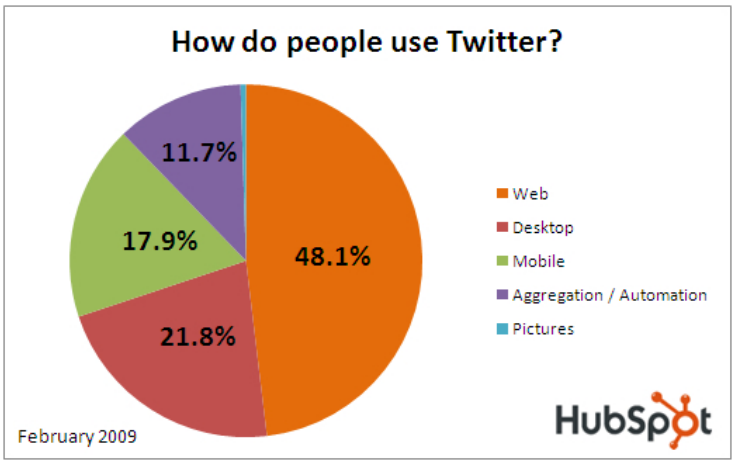

Figure 3. Percentages showing type of interface used to access Twitter (Volpe, 2009).

To interpret the relationship between accessibility and expectations of satisfaction further, one might think of how users' perceptions of Twitter's accessibility affect their expectations of satisfaction. The more that users perceive Twitter to be accessible, the more they expect to be satisfied. A user with low expectations of satisfaction may also perceive Twitter to not be very accessible, possibly due to a lack of knowledge of the multiple ways that Twitter can be accessed. The user may only be aware of using Twitter through its web site interface, for instance, which would decrease perceptions of accessibility when compared to users who are more aware of Twitter's accessibility. Using Twitter only through its web site constrains perceptions of accessibility, which in turn lowers expectations that Twitter will be able to satisfy a user's needs and motivations for using Twitter. On the other hand, if a user is aware of the multiple ways Twitter can be accessed from nearly anywhere, then they might expect Twitter to actually have the capacity to satisfy their needs and motivations. If Twitter—or any other medium—is not perceived as very accessible, the odds are greater that a user will be less

satisfied, which in turn leads to a lower expectations of satisfaction. After all, how can one expect to be satisfied by a medium if it is not readily accessible?

Second, this study hypothesized that prior Twitter experience is negatively related to expectations of satisfaction. Previous studies have noted this relationship (Kaye & Johnson, 2004; LaRose & Eastin, 2004), explaining that as prior experience increases, usage becomes habitualized, and expectations internalized—users expect less from a medium when usage is a daily habit. However, bivariate analysis of prior Twitter experience and expectations of satisfaction did not support this hypothesis—prior Twitter experience did not show a statistically significant relationship with expectations of satisfaction. One possible interpretation is that Twitter is such a new innovation that even the most prior experience possible is limited to the fact that Twitter launched in October 2006—less than two and a half years prior to this study—and results showed that most users have only been actively using Twitter for just about eight months. It makes sense to conclude that usage of less than a year is not long enough to show a significant relationship with expectations of satisfaction. Kaye and Johnson's (2004) study of internet use operationalized prior experience as number of years, while this study used number of months.

Third, this study hypothesized that accessibility is positively related to Twitter use. Previous studies have found that ease of use is positively related to technology use (Davis, 1989; Schepers & Wetzels, 2007; Venkatesh & Davis, 2000). Neither the bivariate or multivariate analyses supported this hypothesis. Similar to the previous hypothesis, one possible interpretation is Twitter's uniqueness as an innovative medium and the fact that most users have only been actively using Twitter for nearly eight months—are users aware of the multiple ways in which Twitter can be accessed? Figure 3 shows that almost half of users still access Twitter

through its web site interface. Furthermore, it is possible that accessibility is not as an important factor of usage as previous studies of other technologies have found. The relationship between accessibility and Twitter use should be investigated further in future studies as accessibility is a core characteristic that makes Twitter so unique—perceptions of accessibility may change over time.

Fourth, this study hypothesized that expectations of satisfaction are positively related to Twitter use. Previous studies have noted that differences between gratifications sought and obtained are positively related to usage (Dobos, 1992; Rayburn & Palmgreen, 1984). Bivariate analysis of expectations of satisfaction and Twitter use did not support this hypothesis. Again, it could be that Twitter is just too new for people to have formed strong enough expectations that significantly affect their use of Twitter. In these early years of Twitter, users may simply be using it without any concrete expectations of actually being satisfied—it could be that users' motives are not impacted by their expectations at all. This is discussed further below—that motives alone are strong enough to predict Twitter use and expectations of being satisfied are irrelevant at this point in Time. Future studies of Twitter should investigate this relationship further.

Fifth, this study hypothesized that prior Twitter experience is positively related to Twitter use. Previous studies have found that prior experience increases internet use behaviors (Eastin & LaRose, 2000; LaRose & Eastin, 2004). While bivariate analysis showed no significant relationship between prior Twitter experience and Twitter use, multivariate hierarchical regression analysis showed that prior Twitter experience is a significant predictor of frequency per week when controlling for demographics and accessibility, thus partially supporting this

hypothesis. In other words, the more prior experience a user has with Twitter, the more frequently they use it.

Toward a Uses and Gratifications Model of Twitter

The last hypothesis stated that the model in Figure 2 would be supported by the data. The proposed model was not supported, with only two of five hypotheses represented in the model showing support. Bivariate analysis showed that total expectations of satisfaction, as well as social and information expectations of satisfaction, were not related to either hours per week or frequency per week of Twitter use. However, by entering the information and social factors of both gratifications sought and obtained as four separate variables into the regression analyses, the two models in Tables 6 and 7 were significant. Specifically, both hierarchical regression models showed that information gratifications sought and obtained significantly predicts Twitter use when controlling for accessibility, prior Twitter experience, and social gratifications sought and obtained. Demographics (age, income, education) were also controlled for, which did not appear in the proposed Twitter model.

One major counterintuitive finding in this study was revealed by the hierarchical regression models—that information gratifications significantly predicted Twitter use, while social gratifications did not. One interpretation of this is that although users may start using Twitter for the social aspect, information gratifications become more important over time as Twitter use increases.

Hierarchical regression analysis showed that accessibility and demographics are antecedent to prior Twitter experience in predicting frequency per week of Twitter use. Prior Twitter experience is a significant predictor of frequency per week of Twitter use only when controlling for accessibility and demographics. Bivariate analysis showed that prior Twitter

experience and demographics were also significantly related to each other. Logically, this makes sense—older users are more likely to have larger incomes and higher levels of education, which in turn increases the odds that they have regular access to the internet at home, work, and on their mobile phones. Bivariate analysis also shows that accessibility and prior Twitter experience are significantly related to each other. This also makes sense—users who perceive Twitter to be more accessible are also more likely to have more prior Twitter experience. If a user does not feel that Twitter is very accessible, the chances are they do not have much experience using it and possibly not even motivated to do so if they think Twitter is not very convenient or easy to use.

Revisiting Gratifications Sought and Obtained

It is interesting to note how the operationalization of expectations of satisfaction did not fit with the proposed model. However, correlated *t* tests for gratifications sought and obtained, as shown in Table 2, help shed light on the individual gratifications sought and obtained items within each factor.

First, only seven out of fifteen motive items had significant differences between gratifications sought and gratifications obtained measurements: have fun; pass the time; communicate with many people at the same time; participate in discussions; express myself freely; meet new people; and see what others are up to.

Second, the differences between gratifications sought and obtained across these seven items were not very large, ranging from absolute value differences of .09 to .24.[11] Furthermore, one item had a negative difference between gratifications obtained and gratifications sought—have fun. One possible explanation is that gratifications sought and obtained were really

[11] Gratifications sought and obtained items were measured on a 5-point scale.

measuring constructs perceived as too similar by participants. Administering two questionnaires at different times to measure each construct separately may help remove measurement error in future studies—measure gratifications sought at Time 1 and gratifications obtained a week or two later at Time 2. Alternatively, gratifications sought and obtained could be measured at different levels of abstraction, similar to Rayburn and Palmgreen's approach (1984), which measured gratifications at a general level (e.g., television news) and a more specific level (e.g., favorite program).

However, it might be more beneficial—within the context of this and similar studies—to split participants randomly into two groups and measure each *factor* separately. The first group would be administered a questionnaire measuring information gratifications sought and social gratifications obtained, while the second group would be administered a questionnaire measuring social gratifications sought and information gratifications obtained.

In conjunction with the few gratification items that showed statistically significant differences, an understanding of possible measurement error helps to clarify a lack of significant relationships between expectations of satisfaction and accessibility, prior Twitter experience, and Twitter use.

Implications and Future Research

From a different perspective, this study points out the importance of understanding the diffusion of technology use acceptance among users of a new medium like Twitter from a uses and gratifications perspective. The results suggest that after users initially sign up for Twitter it takes roughly two months before they begin to actively use Twitter for reading other users' updates and posting their own updates. It has been noted in the technology community that there is an initial barrier to entry for Twitter users once they sign up—they create an account but are

unsure what Twitter really is or is capable of, thus leading to a period of time (in this study, two months) in which they sit on the sidelines waiting for a reason to actively use it. At first, new Twitter users do not have many followers or followees. If they feel that no one is reading their updates or there is no one to interact with, they may be hesitant to use Twitter. A study of Twitter social interactions by Huberman, Romero, and Wu (2009) found that the number of Twitter friends a user has is directly related to their usage of Twitter, thus lending support to this interpretation.

Early adopters have written extensively online about the difficulty of explaining Twitter to first-time users and the mixed fears of jumping in straight away. According to Pogue (2009), a user's point of adoption or "tipping point" (see Gladwell, 2002) is reached when they find one or more reasons to use Twitter more actively—Twitter finds a purpose and fulfills a need that a user might not have even known they had. A user may find that Twitter is a great news source, or that it makes it easier to keep in touch with distant family and friends. They may feel more socially connected and make new friends, or even find Twitter users discussing topics they are interested in. As Calore (2009) points out:

> Twitter is fast outgrowing its roots as a simple, easy-to-use messaging service. Enterprising hackers are creating apps for sharing music and videos, to help you quit smoking and lose weight—spontaneously extending the text-based service into one of the web's most fertile (and least likely) application platforms. (para. 1)

Roger's (2003) diffusion of innovations theory supports this rationale. *Diffusion* is defined as the "process by which an innovation is communicated through certain channels over time among the members of a social system," with new ideas comprising the content of communicated messages (p. 5). An *innovation* is defined as an "idea, practice, or object that is

perceived as new by an individual" and the "perceived newness of the idea of the individual determines his or her reaction to it. If the idea seems new to the individual, it is an innovation" (p. 11). Different ideas have different rates of adoption, which are dependent upon individual perceptions of five unique characteristics of innovations: a) *relative advantage*, the extent that an innovation is perceived as better than previous ideas; b) *compatibility*, the extent to which it is perceived as able to align with the values, experiences, and needs of adopters; c) *complexity*, the extent to which it is perceived as easy to use or comprehend; d) *trialability*, the extent to which it can be used and evaluated by a potential adopter; and e) *observability*, the extent to which the effects of an innovation are witnessed by others. In the "innovation-decision process, an individual passes from *knowledge* (first knowledge of an innovation) to *persuasion* (formation of an attitude toward the innovation) to *decision* (the decision to adopt or reject) to *implementation* (actual use of the innovation) and finally to *confirmation* (commitment to adopt)" (Lajoie-Paquette, 2005, p. 120).

An understanding of diffusion of innovations theory is important to consider when conducting uses and gratifications research of mass media on the internet. Scholars face a multitude of challenges in this rapidly changing landscape of innovations. As of January 2009, the top three social networking sites[12] were Facebook, MySpace, and Twitter. In 2008, the top three sites were MySpace, Facebook, and Classmates,[13] while Twitter was ranked at number 22 (Kazeniac, 2009). Moving from a ranking of 22 to the number three spot in a year is quite an accomplishment. Figure 4 shows that the number of internet users visiting Twitter's web site[14]

[12] Measured as total monthly web site visits
[13] http://www.classmates.com
[14] Measured as unique visitors, which counts an individual visiting the site only once in a given month even if they visited the site more than a single time.

increased by over 900% in one year, from February 2008 to February 2009. More than half of the increase occurred in the last three months, from December 2008 to February 2009.

Twitter's exponential growth in this time period is significant in terms of the interconnectedness of assumptions made by diffusion of innovations theory with uses and gratifications—data from the 242 participants were collected during the last week of January 2009. Collecting cross-sectional data during such a dramatic shift in Twitter's growth calls internal validity into question and the extent to which the final results are generalizable over time for Twitter users. Is there a difference between the gratifications sought and obtained by early adopters and the gratifications sought and obtained by later adopters? If this study were conducted several months earlier or later, the findings may have been different.

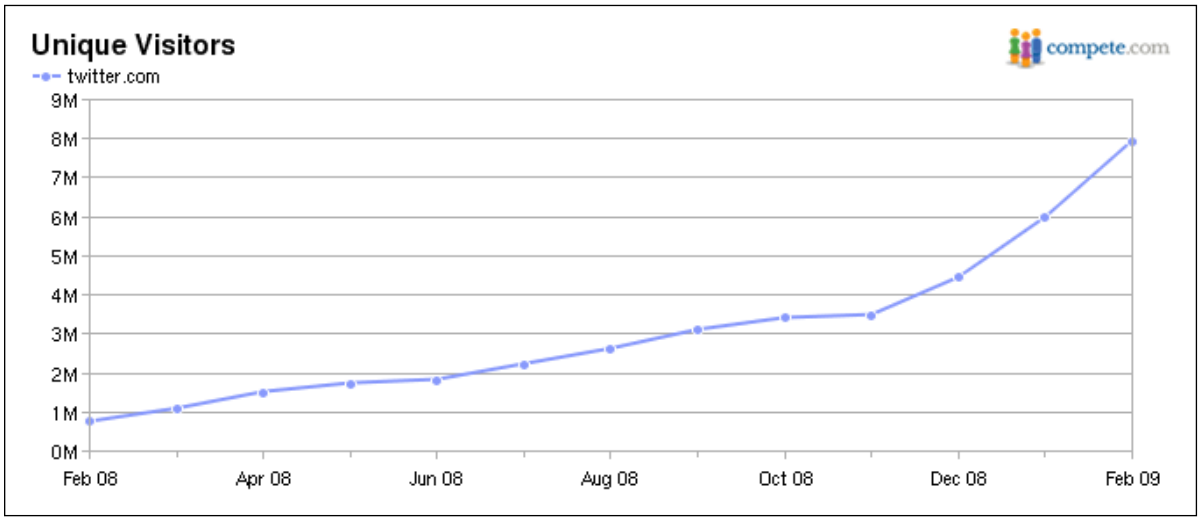

Figure 4. Number of unique visitors to Twitter's web site from February 2008 to February 2009 (Compete, 2009).

But what is it that drives the growth of media like Twitter and Facebook on the internet? One possibility is that the innovations themselves are not static; the design and features of each

medium change over time as developers become more familiar with the needs of their users. For example, a year prior to this study Twitter had fewer features and was less accessible than it is today. Twitter now has search capabilities, which used to be absent, and the number of ways in which Twitter can be accessed has increased with the development of new computer and mobile phone applications. Not only is it possible that the gratifications sought and obtained by users change over time as greater levels of diffusion are reached, but individual media themselves are changing too. A uses and gratifications study of the same medium at different points in time may actually end up investigating a medium with different features and user motivations.

Facebook had different features and looked very different two years ago than what it is today, and its users likely had many different motivations for using it. Facebook constantly evolves as internet technologies change and developers adapt to users' needs and desires that neither the developers nor the users knew they had in the first place. In this sense, the diffusion of innovations on the internet do not follow a linear path, but rather innovations follow a more cyclical and iterative path as new features and innovations within a medium diffuse. Developers receive feedback from users, and additional features and innovations are added to the medium as it grows over time.

Media that do not adapt to this iterative diffusion and feedback process may struggle to survive. The print newspaper industry is an example of this. The newspaper audience moved online and began using—and creating—content in ways that the industry was not able to keep up with. Users took a large degree of control out of the hands of the industry before newspapers knew what to do or how to react. It has taken several years for newspapers to even begin to adapt, and most have yet to change and differentiate themselves in ways that create competitive advantage. Now, internet mass media like Twitter, blogs, and Facebook fulfill the information

needs of readers more easily and efficiently than newspapers were once able to do. Armstrong (2009) noted this trend in *BusinessWeek*:

> The days of information monopoly are over, and that's a fundamental shift. And the industry should be further along than it is. Rather than saying, "Here's everything we think is relevant to you—and we even put it in sections!" how about, "What do you want to know about today?" Or, for even greater efficiency: "Tick these boxes, and we'll make a newspaper just for you." (para. 7)

This is exactly what Twitter is, and along with other services (e.g., Google Reader[15]) that "pull" content in from various sources, the audience now has the capacity to easily customize which streams of content to consume or not consume. As this study and others have proposed, accessibility (or ease of use, convenience, speed, and so on) is a key ingredient to audience control of information consumption. By following certain users, bloggers, news organizations, and companies on Twitter, we are able to avoid the sense of information overload that the internet brings, such as when a search in Google brings us a list of results in the millions. Selectively choosing which Twitter users to follow helps us overcome this information overload by filtering out the noise of the internet—if I follow a handful of bloggers who write on a certain topic, and news organizations that I trust, Twitter becomes my one-stop-shop for getting information.

An informal online poll[16] conducted by Twitter user @PRsarahevans of her Facebook, Twitter, LinkedIn, and personal email contacts (Evans, 2009) asked the question, "What is the FIRST media outlet you look/listen to in order to get your news on a DAILY/consistent basis?" Results of more than 930 votes cast over seven days showed a diverse variety of media outlets,

[15] http://www.google.com/reader
[16] http://twtpoll.com/r/4cu87w

but the majority of votes were case for three main sources. While online news sites received 27% of the votes, Twitter came in second place at 18%. Television trailed close behind with 15% of the votes. Although this poll is neither statistically significant nor grounded in science, it represents a trend in how audiences are consuming news and information.

One caveat of researching new technologies and new forms of mass media on the internet is that they grow and change at such a fast pace. Scholars risk conducting research that becomes irrelevant before it has a chance to be published or presented at conferences, due to slow and restrictive institutionalized processes. In contrast, the commercial research industry often issues press releases and publishes white papers of timely research findings, like the Pew Research Center, The Nielsen Company, Forrester Research, and HP Laboratories. It may be beneficial for academia to follow suit. For example, scholars could write blog posts to summarize research findings, post videos of research presentations on YouTube, or publish executive summaries of findings online via personal or university web sites. Academia could also endorse the submission of research to online open access journals, which publish articles accessible online to anyone for free, with a faster and more efficient refereed publication process. Furthermore, as most scholars do not typically get paid by journals for their work, they do not risk losing revenue from an open access journal that freely publishes and distributes their work (Suber, 2004).

As this study sought to design and test a model of a specific mass medium using concepts from past research, it is important to provide context and insight into the environment in which this study was conducted. For example, it is quite possible that the proposed model did not fit the data as intended due to the simple fact that it is difficult to research new forms of mass media on the internet in such a turbulent and fast-changing environment. It might also be more beneficial

to conduct panel studies to investigate how relationships between concepts evolve and change over time with any given medium.

However, a panel study may last only a year or two if the object of study ceases to exist or merges with similar services (e.g., Google's purchase of YouTube and the subsequent incorporation of Google Video content with YouTube's platform). As stated previously, the internet is an evolving environment that changes quickly as new and old forms of internet media gain and lose popularity. The internet is a medium of multiple mass media, which allows for new forms of media to be created and fulfill various needs—both old and new—of internet users in ways that are faster, more accessible and convenient, and easier to use than traditional forms of mass media. The active audience is progressively more in control of media content on the internet, signaling enormous implications for the mass media industry and scholars. For example, the audience had all but brought down the corporate music industry with music file sharing, and it took several years for the music industry to catch up. During this time, independent music labels thrived on YouTube, MySpace, and other music social media sites—artists who would not have otherwise received attention from the corporate music industry became accessible to mass audiences on the internet.

Mass media built on the internet tap into niche markets with more efficiency and speed than traditional mass media business models have been able to keep up with. Such is the case with Twitter, as Twitter has become a primary source of news for many users (Evans, 2009). As such, McLuhan's (1964) statement that "the medium is the message" holds true decades later as each new form of mass media on the internet is introduced. The personal and social consequences are both intended and unintended—Twitter was created to keep in touch with friends via status updates of what a user is currently doing, but this study shows that Twitter is

primarily used as an information source, as well as a means to share information. Media like Twitter have allowed users to realize behaviors, motivations, and gratifications that they either never had or were never quite able to act on as active audience members of traditional media. Twitter is just one of many exemplars of this trend, and others will surely follow. Unmistakably, it is not the medium itself, but what users do with a medium, that becomes "its meaning or message."

Appendix 1
Electronic Consent Form

The purpose of this study is to examine Twitter usage. Questions will be asked regarding your use of Twitter.

It will take 5-10 minutes of your time.

Your participation is voluntary and you can withdraw at any time or choose to not answer questions. There are no direct benefits or risks to you if you wish to participate.

All information you provide will be kept confidential and anonymous. None of the information you provide can identify you or link any of your responses to you.

If you have any questions, concerns, or complaints about this study or your rights as a research participant, please contact Philip Johnson (phjohnso@syr.edu, +1-315-430-9133), or the faculty advisor of this study, Dr. Pamela J. Shoemaker (snowshoe@syr.edu, +1-315-443-9255).

You may also contact the Syracuse University Institutional Review Board if you have any questions about your rights as a research participant, or if you have any questions, concerns, or complaints that you wish to address to someone other than the researchers, or if you cannot reach the researchers using the information above. The Syracuse University Institutional Review Board can be contacted at +1-315-430-9133.

At the end, there will be a link to share this questionnaire with your Twitter friends. We appreciate your help in letting others know about this study.

By proceeding, you are giving your consent to participate and that you are 18 years of age or older.

Appendix 2
Online Survey Questionnaire

[Page 1] Electronic Consent Form

[See Appendix 1]

[Page 2] Twitter User?

1. Do you have a Twitter account? *[Required.]*

   1.) Yes *[If yes, then participant continues on to the next question.]*
   2.) No *[If no, then participant is sent to demographics questions.]*

[Page 3] Prior Experience

2. How familiar are you with Twitter?

Not at all familiar 1 2 3 4 5 6 7 Very familiar

3. How long ago did you sign up for a Twitter account (in months)?

   _____ Number of months

4. How many of these months have you been actively reading others' Twitter updates?

   _____ Number of months

5. How many of these months have you been actively posting updates to Twitter?

   _____ Number of months

[Page 4] Twitter Use

6. On average, how many days a week do you use Twitter?

0 1 2 3 4 5 6 7

7. On the days you use Twitter, about how much time do you spend using Twitter?

_____ hours

_____ minutes

8. Sometimes people access Twitter multiple times a day. On average, how many times a day do you access Twitter?

_____ times a day

[Page 5] Gratifications Sought

9. Below is a list of reasons people have given for using Twitter. Choose your level of disagreement or agreement with each reason for why you use Twitter.

"I use Twitter…"

	Strongly Disagree	**Disagree**	**Neither**	**Agree**	**Strongly Agree**
To express myself freely.	1	2	3	4	5
To communicate more easily.	1	2	3	4	5
To have fun.	1	2	3	4	5
To learn interesting things.	1	2	3	4	5
To give or receive advice.	1	2	3	4	5
To meet new people.	1	2	3	4	5
To keep in touch with friends or family.	1	2	3	4	5
To share information with others (facts, links, news, knowledge, ideas).	1	2	3	4	5
To be entertained.	1	2	3	4	5
To see what others are up to.	1	2	3	4	5
To relax.	1	2	3	4	5
To participate in discussions.	1	2	3	4	5
To get information (facts, links, news, knowledge, ideas).	1	2	3	4	5
To pass the time.	1	2	3	4	5
To communicate with many people at the same time.	1	2	3	4	5

[Page 6] Accessibility 1

10. Using Twitter is clear and understandable.

Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	2	3	4	5

11. Twitter is easy to use.

Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	2	3	4	5

12. It is convenient to use Twitter.

Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	2	3	4	5

[Page 7] Accessibility 2

13. Twitter is accessible.

Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	2	3	4	5

14. Using Twitter does not require a lot of mental effort.

Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	2	3	4	5

15. It is easy to get Twitter to do what I want it to do.

Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
1	2	3	4	5

[Page 8] Gratifications Obtained

16. Below is a list of ways people have said Twitter actually helps them. Choose your level of disagreement or agreement with how well Twitter actually helps you with each item.

"Twitter actually helps me…"

	Strongly Disagree	**Disagree**	**Neither**	**Agree**	**Strongly Agree**
Express myself freely.	1	2	3	4	5
Communicate more easily.	1	2	3	4	5
Have fun.	1	2	3	4	5
Learn interesting things.	1	2	3	4	5
Give or receive advice.	1	2	3	4	5
Meet new people.	1	2	3	4	5
Keep in touch with friends or family.	1	2	3	4	5
Share information with others (facts, links, news, knowledge, ideas).	1	2	3	4	5
Be entertained.	1	2	3	4	5
See what others are up to.	1	2	3	4	5
Relax.	1	2	3	4	5
Participate in discussions.	1	2	3	4	5
Get information (facts, links, news, knowledge, ideas).	1	2	3	4	5
Pass the time.	1	2	3	4	5
Communicate with many people at the same time.	1	2	3	4	5

[Page 9] Demographic Questions

17. How old were you on your last birthday?

_____

18. What is your gender?

1) male
2) female

19. Are you of Hispanic origin?

1.) Yes *[Skip to question 21.]*
2.) No *[Go to the next question.]*

20. Which of the following best describes your race?

1) White/European decent
2) Black/African-American
3) Asian/Pacific Islander
4) American Indian/Alaska Native
5) Other
6) Combination of two or more of the above

21. In what country do you currently live?

_____

22. In what country were you born?

_____

23. Which of the following best describes your total household income?

1) $0-14,999
2) $15,000-34,999
3) $35,000-49,999
4) $50,000-74,999
5) $75,000-99,999
6) $100,000-149,999
7) $150,000-199,999
8) $200,000 or more

24. What best describes your employment status?

1) Employed full time
2) Not employed
3) Retired
4) Student
5) Homemaker

25. What best describes your highest level of education completed?

1) High school/secondary school graduate or equivalent
2) Some college
3) Associate degree
4) Bachelor's degree
5) Master's degree
6) Professional school degree (MD, LLB, JD, DDS, DVM)
7) Doctorate (PhD, EdD, DrPH)

26. In which industry do you work?

1) Accounting
2) Advertising
3) Aerospace / Aviation / Automotive
4) Agriculture / Forestry / Fishing
5) Biotechnology
6) Business Services (Hotels, Lodging Places)
7) Computers (Hardware, Desktop Software)
8) Communications
9) Construction / Home Improvement
10) Consulting
11) Education
12) Engineering / Architecture
13) Entertainment / Recreation
14) Finance / Banking / Insurance
15) Food Service
16) Government / Military
17) Healthcare / Medical
18) Internet / Information Technology
19) Legal
20) Manufacturing
21) Marketing / Market Research / Public Relations
22) Media / Printing / Publishing
23) Non-Profit
24) Pharmaceutical / Chemical
25) Research / Science
26) Real Estate

27) Retail
28) Telecommunications
29) Utilities
30) Wholesale
31) Transportation / Distribution
32) Utilities
33) Business / Professional Services
34) Other
35) Unemployed/Retired/Homemaker

27. Which best describes your job title?

1) Top Level Executive
2) Senior Vice President
3) Vice President
4) Director
5) Manager
6) Professional
7) Administrative/Support personnel
8) Unemployed/Retired/Homemaker

[Page 10] Thank You/Redirect Page

Thank you for taking the time to complete this questionnaire. It is very much appreciated.

Click to share this questionnaire with your Twitter Friends!

Or copy and paste this link to send to your friends:
http://philrj.twitterusage.sgizmo.com

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Education

Ph.D. (mass communication), *due 2014*, S. I. Newhouse School of Public Communications, Syracuse University. Dissertation: *Building Relationships Online with Exclusive Content: Social Media Engagement, Content Exclusivity, and Public Relations Outcomes*. Advisor: Pamela J. Shoemaker.

M.S. (media studies), S. I. Newhouse School of Public Communications, Syracuse University, 2014. Thesis: *Toward a Uses and Gratifications Model of Twitter*. Advisor: Pamela J. Shoemaker

B.S. (public relations), S. I. Newhouse School of Public Communications, Syracuse University, 2004.

Teaching Experience

Public Relations Research | (2013, Spring) | Undergraduate Level
Assistant Professor
Public Relations Department, Syracuse University, S. I. Newhouse School of Public Communications

One section of 20 students. Taught applied research using qualitative and quantitative methods and data analysis techniques for measuring public relations concepts, ethics, and issues relevant to the decision-making needs of a client for public relations planning and management. Student teams conducted primary research projects while working with a real-world client, Two Degrees Food (twodegreesfood.com) an organization that gives one meal to a hungry child for each snack bar sold.

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[2] http://www.linkedin.com/in/philipryanjohnson

Public Relations Campaigns Planning & Execution | (2013, Spring) | Undergraduate Level
Assistant Professor
Public Relations Department, Syracuse University, S. I. Newhouse School of Public Communications

One section of 15 students. Taught strategic communication campaign planning for public relations. Student team projects included the design and delivery of public relations strategic plans while working with a real-world client, The National Foundation to End Senior Hunger (www.nfesh.org) a non-profit startup with previous leadership from the Meals on Wheels Association of America.

Public Relations Research | (2012, Fall) | Undergraduate Level
Assistant Professor
Public Relations Department, Syracuse University, S. I. Newhouse School of Public Communications

Three sections of course (15-20 students each). Taught applied research using qualitative and quantitative methods and data analysis techniques for measuring public relations concepts, ethics, and issues relevant to the decision-making needs of a client for public relations planning and management. Student teams conducted primary research projects while working with real-world clients, including: a) SU Sustainability (greenuniversecity.syr.edu, the Sustainability Division at Syracuse University); b) Film Geek Radio (www.filmgeekradio.com, a film/TV podcasting network startup); and c) The National Foundation to End Senior Hunger (www.nfesh.org, a non-profit startup with previous leadership from the Meals on Wheels Association of America).

Social Media for Public Relations | (2012, Summer) | Graduate Level
Adjunct Faculty
Public Relations Department, Syracuse University, S. I. Newhouse School of Public Communications

Class of 14 students during one-week intensive "MAYmester" instruction with additional project completed outside of the classroom. Students completed rigorous social media strategic plans in teams of two or three for an organization of their choice.

Public Relations Campaigns Planning & Execution | (2012, Spring) | Undergraduate Level
Adjunct Faculty
Public Relations Department, Syracuse University, S. I. Newhouse School of Public Communications

Class of 14 students, taught strategic communication campaign planning for public relations. Student teams conducted strategic planning projects while working with a real-world client.

Public Relations Research | (2011, Fall) | Undergraduate Level
Adjunct Faculty
Public Relations Department, Syracuse University, S. I. Newhouse School of Public Communications

Class of 21 students, taught the basics of qualitative and quantitative research methods and data analysis techniques for measuring public relations concepts, ethics, and issues as they relate to public relations planning and management. Student teams conduct real-world research projects while working with a client.

Social Media for Public Relations | (2011, Summer) | Graduate Level
Adjunct Faculty
Newhouse Executive Education ISDP Program, Master's in Communication Management
Syracuse University, S. I. Newhouse School of Public Communications

Class of 18 students, comprised of senior and middle-management level communications professionals, representing leading organizations in the pharmaceutical, insurance, non-profit, education, entertainment, and media industries. The course began with intensive classroom instruction during a one-week residency, with the remainder of the course taught online. Students completed a rigorous social media strategic plan project for their own organizations.

Introduction to Research Methods & Data Analysis | (2010, Fall) | Graduate Level
Teaching Assistant to Dr. Pamela Shoemaker
Communications Department, *Syracuse University, S. I. Newhouse School of Public Communications*

Worked with Dr. Shoemaker to create course materials and plan instruction for the preliminary research methods course taught to first-semester Ph.D. and Media Studies Master's students. Taught a series of optional weekend statistics/SPSS workshops throughout the semester—with full attendance. Responsible for grading statistics assignments, from descriptive and bivariate analysis through multiple regression analysis. Co-taught and/or led instruction during several class sessions. Held office hours for data analysis, statistics, and SPSS instruction.

Social Media for Public Relations | (2010, Spring) | Undergraduate Level
Adjunct Faculty
Public Relations Department, *Syracuse University, S. I. Newhouse School of Public Communications*

Designed, planned, and instructed first-ever course on social/digital media for the Public Relations Department. Class of 35 students worked with local non-profits to create an social media strategic plan. Eight teams of 4-5 students assigned to client: It's All About Childhood & Family, Fulton YMCA, St. Charles School at Bishop's Academy, Vera House, Two Smiles One Home, YWCA, Literacy Volunteers, and Girl Scouts of NYPENN.

Introduction to Research Methods & Data Analysis | (2009, Fall) | Graduate Level
Teaching Assistant to Dr. Pamela Shoemaker
Communications Department, *Syracuse University, S. I. Newhouse School of Public Communications*

Worked with Dr. Shoemaker to create course materials and plan instruction for the preliminary research methods course taught to first-semester Ph.D. and Media Studies Master's students. Responsible for grading statistics assignments, from descriptive and bivariate analysis through multiple regression analysis. Co-taught and/or led instruction during several class sessions. Held office hours for data analysis, statistics, and SPSS instruction.

Consulting Experience

Dec. 2005 – : *Lakeland Winery, Inc., Syracuse, New York.* Develop communication strategies, adapting to business growth and change. Planned, designed, and maintain company web site, www.lakelandwinery.com. Provide IT support, video editing and photography services.

July 2006 – : *Dale Pierce Fine Art Photography, Syracuse, New York.* Planned, designed, and maintain web site, www.dpfineartphoto.com.

Nov. 2005 – : ***CNY Multinational Liaison Club, Syracuse, New York.*** Digital and web design consultant, www.cnymlc.org.

Oct. 2002 – Feb. 2003: ***Ambrosia Lounge, Syracuse, New York.*** Implemented grassroots marketing campaign to build image and reputation, created strategies for event promotions. Worked on strategy and built relationships with media and student organizations to target and increase key public awareness of brand and image. Researched regional music artists and presented recommendations.

Professional Experience

Nov. 2005 – Dec. 2006: ***Director of Marketing and Interactive Communications, CNY Multinational Liaison Club, Syracuse, New York.*** Designed logo, brochures, marketing materials and web site. Responsible for marketing and public relations plans to drive paid membership (from 0 to over 50), raise community awareness, and attract sponsorship. Assisted with managing and planning monthly events.

Feb. 2005 – July 2005: ***Personal Assistant, Practice Manager Trainee, Vance Harris Solicitors, London.*** Improved internal communication strategies between remote offices and among telecommuting employees. Overhauled analogue dictation system to digital format with email integration and trained staff. Implemented system updates including company intranet, software, electronic document scanning and archiving. Managed client database, office diaries, files, and logs. Executed searches and drafted letters.

Summer 2004: ***Contract Legal Assistant, Verizon Communications, Washington & New York.*** Managed *nMatrix* database of 250 thousand trial documents for *Verizon vs. Yellowbook* (2004). Oversaw logistics of trial site and setup; computers, printers, and network. Provided administrative and IT support to upper management and legal counsel. Provided training for legal counsel on *nMatrix* database system.

Spring 2004: ***Student Account Intern, New York Parks & Conservation Association, Syracuse, New York.*** Team designed 100-page public relations campaign for annual Cycling the Erie Canal bicycle tour and collaboratively presented campaign to client. Campaign included in-depth analysis of organization's business problems and opportunities, supported with primary and secondary research and strategic plan.

Autumn 2003: ***Account Intern, Blurb PR, London.*** Built relationships with national media to gain interview spots and reviews of clients' musical and artistic works. Implemented solutions to tackle internal communications issues to reduce time-wasting and increase efficiency. Designed advertisement for placement in *Music Week*.

Autumn 2003: ***Student Account Intern, The Children's Art Foundation, London.*** Helped plan and implement a zero-budget campaign for the charity's launch. Built relationships with art institutions and artists (Crayola, Victoria & Albert Museum, Tate museums). Achieved team's sponsorship goals and over and above the donation level.

Nov. 2001 – May 2005: ***CEO, Nuistic, Syracuse, New York.*** Launched combined music event promotion, record label, and artist management company. Partnered with Phato USA to collaborate on first-ever *Syracuse Electronic Music Festival* (in Syracuse, New York) with over 35 electronic music artists and 2,500 in attendance. Established business plan, feasibility and risk analyses. Allocated $40,000 in artist contracts, promotional and marketing activities, and production costs. Managed staffing and directed promotions and production team. Procured local media radio and print advertising buys. Implemented guerrilla/grassroots public relations and promotional tactics to create awareness and buzz across college campuses in the Northeastern United States. Received front page coverage in *The Daily Orange* print edition, *Spin the black circle: Mars 2 hits Syracuse Saturday*.

Research Experience

2007 — 2012: ***Research Assistant to the John Ben Snow Professor, Pamela J. Shoemaker, S. I. Newhouse School of Public Communications, Syracuse University, Syracuse, New York.*** Writing and publication of articles, books, and book chapters. Design of scholarly research investigating online news, communication processes, political communication, and media content. Content analysis and survey methodologies. Use and instruction of BIOPAC physiological data acquisition and analysis system for experimental research designs investigating physiological reactions to media content. Use and instruction of MediaLab for administering experimental stimuli of media content to research participants.

2007: ***Research Assistant to Dr. Brenda Wrigley, APR, S. I. Newhouse School of Public Communications, Syracuse University, Syracuse, New York.*** Writing and research duties. Assisted with research proposal for the Public Relations Society of America. Helped conduct focus group research at the 2007 PRSA National Convention in Philadelphia, PA. Ongoing research includes an investigation of diversity issues in the workplace among lesbian, gay, bisexual, and transgendered public relations professionals.

Research Interests

- Social media, public relations management, crisis communication
- Internet media platforms, digital/social communication technologies
- Media sociology and online news
- Media ethics, diversity, Queer Theory, LGBT-related issues
- Multilevel modeling, hierarchical linear modeling, mixed modeling

Research Skills

Quantitative	Content analysis, survey research, bivariate and multivariate analysis, multilevel modeling, structural equation modeling (SEM), discriminant analysis, conjoint analysis, Q-Methodology, bootstrapping, Stata, NodeXL, SPSS Statistics 20, SPSS Amos 20.
Qualitative	Textual analysis, focus group methodology, in-depth interviewing, case studies, situation analysis, user-based approaches, grounded theory.
Theory	Gatekeeping Theory, social media engagement, strategic communication, agenda- setting, situational theory, uses and gratifications approaches, information seeking and use, information systems, interpersonal, queer theory.

Research Awards

Barthel, M., Johnson, P. R., Hou, Jinghui, Ma, Yujing, & Crider, David (August, 2009). *The Effects of Health Message Vividness on Attitudes Toward Students with ADHD.* **Top Paper Award, First Place Special Paper Call,** "**Media & Social Change**," Mass Communication and Society Division, Association for Education in Journalism and Mass Communication conference, Boston, MA.

Johnson, P. R., & Liebman, J. E. (2008, August). *Blogs and Agenda-Setting in the 2006 Pennsylvania Senate Race.* **Top Paper Award, Mass Communication and Society Division***,* Association for Education in Journalism and Mass Communication conference, Chicago, IL.

Refereed Journal Publications

Shoemaker, P. J., Johnson, P. R., Seo, H., & Wang, X. (2010). Readers as gatekeepers of online news: Brazil, China, and the United States. *Brazilian Journalism Research, 6*(1), 55-77.

Yang, S., Kang, M., & Johnson, P. (2010). Effects of narratives, openness to dialogic communication, and credibility on engagement in crisis communication through organizational blogs. *Communication Research, 37*(4), 473-497.

Book Chapters

Shoemaker, P. J., Johnson, P. R., & Riccio, J. R. (forthcoming). Political gatekeeping. In K. Kenski and K. Jamieson (Eds.), *Handbook of Political Communication*.

Shoemaker, P. J., & Johnson, P. R. (In Press). Spin. In G. H. Stempel (Ed.), *The Encyclopedia of Political Communication*. Santa Barbara, CA: ABC-CLIO.

Shoemaker, P. J., Riccio, J. R., & Johnson, P. R. (2013). Whom. In P. Cobley and P. J. Schulz (Eds.), *Theories and Models of Communication* (pp. 383-398). Berlin, Germany: de Gruyter Mouton.

Shoemaker, P. J., Johnson, P. R., & Riccio, J. R. (2013). Gatekeeping. *The Oxford Bibliographies Online*. Oxford University Press, www.oxfordbibliographies.com.

Shoemaker, P., Cohen, A., Seo, H., & Johnson, P. (2012). Comparing news on foreign and international affairs. In F. Esser and T. Hanitzsch (Eds.), *The Handbook of Comparative Communication Research* (pp. 341-352). New York, NY: Routledge.

Shoemaker, P. J., Johnson, P. R., Seo, H., & Wang, X. (2010). Readers as gatekeepers of online news: Russia, China, and the United States. In E. Vartanova (Ed.), *Content, Channels, and Audiences in the New Millennium: Interaction and Interrelations* (pp. 73-103). Moscow: Faculty of Journalism, Lomonosov MSU – MediaMir.

Refereed Conference Papers

Johnson, P. R., Bazaa, U., & Chen, L. (2011, May). *The new boundary spanners: Social media users, engagement, and public relations outcomes*. Paper presented at the annual International Communication Association conference, Boston, MA.

Shoemaker, P., Johnson, P. R., Seo, H., & Wang, X. (2010, October). *The popularity of online news: Gatekeeping by readers in four countries*. Paper presented at the Convergence and Society: Science, Health, & New Dimensions of Communication conference, University of South Carolina, Columbia, SC.

Johnson, P. R., & Yang, S. (2009, August). *Uses and gratifications of Twitter: An examination of user motives and satisfaction of Twitter use.* Paper presented at the annual Association for Education in Journalism and Mass Communication conference, Boston, MA.

Yang, S., Kang, M., Johnson, P. R., Duncan, E. (2009, August). *A blog-mediated crisis communication model: Effects of engagement on post-crisis outcomes.* Paper presented at the annual Association for Education in Journalism and Mass Communication conference, Boston, MA.

Barthel, M., Johnson, P. R., Hou, J., Ma, Y., & Crider, D. (2009, August). *The effects of health message vividness on attitudes toward students with ADHD.* Paper presented at the annual Association for Education in Journalism and Mass Communication conference, Boston, MA.

Seo, H-J., Johnson, P. R., & Stein, J. (2009, May). *Media framing of 'Axis-of-Evil' leaders: A study on the effects of news framing on audiences' evaluations of foreign leaders.* Paper presented at the annual International Communication Association conference, Chicago, IL.

Chock, M., Shoemaker, P., Seo, H-J., Johnson, P. R., Zhang, D., & Barthel, M. (2009, May). *Twas a dark and stormy...: The effects of content and structural complexity on processing news.* Paper presented at the annual International Communication Association conference, Chicago, IL.

Shoemaker, P., Seo, H-J., Johnson, P. R., & Wang, X. (2008, October). *Audience gatekeeping: A study of The New York Times most-emailed news items*. Paper presented to the Conference on Convergence and Society: The Participatory Web (3.0), University of South Carolina, Columbia, SC.

Johnson, P. R., & Liebman, J. E. (2008, August). *Blogs and agenda-setting in the 2006 Pennsylvania Senate race*. Paper presented at the annual Association for Education in Journalism and Mass Communication conference, Chicago, IL.

Johnson, P. R., and Yang, S. (2008, August). *Popularity of news items on Digg: Toward a definition of newsworthiness for social news sites*. Paper presented at the annual Association for Education in Journalism and Mass Communication conference, Chicago, IL.

Johnson, P. R. (2008, August). *Defining a gay Logo with Coming Out Stories: Containing queer identities with reality television*. Paper presented at the annual Association for Education in Journalism and Mass Communication conference, Chicago, IL.

Shoemaker, P. J., Wang, X., Seo, H., Johnson, P. (2008, May). *What shapes the US image in the world? Deviance, personal experience, and mass media*. Paper presented at the annual International Communication Association conference, Montreal, Canada.

Invited Social Media Workshops

Invited Speaker – *"'Branding' Yourself: Social Media and Professional Identity."* Future Professoriate Program/Preparing Future Faculty Annual Conference, Hamilton, New York, May 2010. The workshop helped attendees navigate through simple solutions to get noticed and equip them with actionable steps to organize, extend, and manage a personal brand online.

Keynote Speaker – *"Social Media for Local Non-Profits."* comm.UNITY Social Media Seminar, November 20th, 2009 at the United Way, Syracuse, NY. Attended by ARISE, Aurora of CNY, Girl Scouts, Huntington Family, LDA CNY, Literacy Volunteers of Greater Syracuse, Salvation Army, Spanish Action League, SUNY Oswego, United Way, Women's Fund, and YWCA. comm.UNITY is a student-run organization at Syracuse University that works with local non-profit organizations in their strategic communication efforts.

Keynote Speaker – *"Social Media, Personal Branding, Blogging, & Your Future Career."* comm.UNITY Social Media Seminar, March 3rd, 2010 at the S. I. Newhouse School of Public Communications, Syracuse, NY. Attended by comm.UNITY student membership and the Syracuse University community. comm.UNITY is a student-run organization at Syracuse University that works with local non-profit organizations in their strategic communication efforts.

Invited Lectures

Invited guest lecturer on social media in undergraduate sections of public relations and communication courses, including: Principles & Concepts of Public Relations, Public Relations Writing, Public Relations Management, Communications & Society, Public Relations Research, and a graduate section of Public Relations Management.

Affiliations & Honors

- International Association of Business Communicators (IABC)
- International Communication Association (ICA)
- Association for Education in Journalism and Mass Communication (AEJMC)
- Association for Computing Machinery (ACM)
- Public Relations Student Society of America (PRSSA)
- Phi Eta Sigma honor society
- Golden Key International Honour Society
- Syracuse University LGBT Ally Development Facilitator
- *The Out Crowd* magazine, founding member
- Syracuse University Chancellor Scholar
- National Honor Society
- Central New York Multinational Liaison Club
- BUNAC work abroad program, London
- Syracuse University London Program