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CELL PHONE DEPENDENCY, USES AND
ETIQUETTE ACROSS GENERATIONS

by

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Abstract

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Robert Joseph Bauer

The mobile phone, cell phone, or smart phones are a few names this device is known by. Though it is much more than a phone now. It can start a car, provide weather alerts, and even capture the moment with a camera. While cell phones provide a constant connection, they sometimes keep their users so connected that they become disconnected from the moment they are in. The following study sought to measure just how connected two groups of cell phone users are to these devices. Millennials and Baby Boomers answered questions that measured their dependency on this device as well as how often and how important they use specific cell phone functions. This study also set out to gauge how these generations viewed cell phone etiquette. While Millennials provided responses indicating higher and dependency and usage of the cell phone, they also demonstrated less stringent concepts of cell phone etiquette.

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Introduction

Wherever one looks nowadays, he or she is bound to witness someone using a cell phone. The cell phone is an integral part of modern society's means of communication. People now have the ability to access email, chat face-to-face, and even play games among many other activities from the palm of their hands, with a smart phone. When observing this communicative mechanism from a generational perspective, there may be interesting facts that rest in how different generations use this device and how the device fits into social norms. Specifically, the technology rich generation deemed the "Millennials," has been known to utilize technology and more specifically the cell phone more than other generations (Kroski, 2008). Studying how the Millennial generation compares against the Baby Boomer generation in regards to cell phone use and cell phone etiquette may provide more insight towards research in generational communication (Lee, 2006).

There may be reason to draw a comparison between generations in regards to cell phone use and etiquette. Researchers have found differences in values, communication styles, leadership styles, loyalty, and various other characteristics among the generations (Dainton & Zelle, 2010). Though the names for these generations and the year ranges may vary, there are four generations, which include Veterans (born 1922-1945), Baby Boomers (born 1946-1964), Generation X (born 1965-1980), and Millennials or Generation Y (1980-2000) (Dainton & Zelle, 2010). Twenge and Campbell (2008) found five major factors, which separate Millennials from other generations. Two of these factors in particular may be useful in explaining specific Millennial cell phone habits.

The first is Millennials are less likely to follow rules. This could have implications regarding Millennials' view of the unwritten rules, which regulate cell phone etiquette. The next factor is Millennials have higher levels of anxiety and depression. These two aspects may appear relevant within the generational gap in regards to cell phone communication, as does the concept of uses and gratification. In particular, aspects such as Millennials' attitude towards rules may have an effect on their views regarding the unwritten rules that regulate cell phone etiquette. The tendency of Millennials to defy rules and act according to their own mindsets may imply similar behavior towards the rules of cell phones. Whether it be breaking real laws such as using a phone while driving or unwritten social laws such as interrupting a face-to-face conversation, Millennials' inclination towards rule breaking may play into their attitudes about cell phone etiquette. Millennials' higher levels of anxiety may have implications in regards to their dependence and distress in the absence of cell phone access (Stam & Stanton, 2004). As the cell phone has become a cling-to possession and hub for social life, it may be scary to think how those dependent on a cell phone may react if their cell phone were to break, die, or be out of reach. Perhaps the anxiety inclined Millennials may experience a harsher reality when facing that reality without a cell phone.

Katz, Blumberg, and Gurevitch (1973) discussed how humans have the ability to make choices freely. In doing so humans have the ability to decide what media to use and to interact with when they want to. Comparing the differences of uses and gratifications from the Millennial perspective against other generations can give greater insight into generational differences in uses and gratification in regards to a very specific and widely

utilized communication device. For example one generation may use a phone for one reason while another is less likely to do so. Or another example could be that one generation seeks certain information via a phone while another is less likely to do so. Krohn (2004) for example studied the use of emoticons in cell phone communication and determined that Millennials were more likely to use emoticons than were Baby Boomers. Lee (2006) studied cell phone uses across generations as well and concluded, “younger generations have a wider variety of motives and use functionally enhanced services of the mobile phone more diversely than the older generations do” (p. 20).

One concern of the enhanced features of the modern cell phone is that of dependency theory (Pearce, 2009; Shin, 2009). While uses and gratification can apply in a similar aspect, when cell phone users learn they can satisfy their needs for media through a certain device, there is a chance of dependency developing on that device (Pearce, 2009; Shin, 2009). This also coincides with expectation confirmation theory in which users of a particular medium expect satisfaction from that medium and will continue to use it in expectation of that satisfaction (Shin, 2011). Dependency theory and expectation confirmation theory may be useful in describing how particular members of generations grow dependent on cell phones in regard to what they expect from the device. Understanding how generations use and are satisfied by the cell phone may have some implications for how dependent members of a given generation are on the cell phone for the specific purposes they use the cell phone for.

Though there is little research available on cell phone etiquette, it is still an issue discussed in the popular media. Bosker (2010) for example compiled a list of cell phone

do's and don'ts. Among the topics included in the article were refraining from accepting calls or texting while in the middle of a face-to-face conversation (Bosker, 2010). Elgan (2010) noted, "A visitor from another planet might conclude that rudeness is a cell phone's main purpose" (p. 1). Instances such as annoying cell phone rings, talking too loudly in a quiet place, sharing personal stories in a public place or interrupting face-to-face conversations are just some of the usual suspects people are pointing towards in terms of cell phone etiquette.

The concept of cell phone etiquette is a birthing concern, as cell phones are appearing in the hands of millions of people worldwide. One theory that may help discuss the concept of cell phone etiquette is that of expectancy violation (Burgoon, 2009; Dainton & Zelle, 2010). Though this theory may be more extensive than the intent of the research, there are still signs of its importance. Dainton and Zelle (2010) proposed the three core aspects of the theory involving: context, relationship, and communicator's characteristics. These all apply to "how a given person should and will likely behave" (Dainton & Zelle, 2010, p. 48). By enveloping these aspects of norms and expectations into cell phone use, it may be evident that similarities or differences exist between Millennials and Baby Boomers in regards to that cell phone use. In particular this theory will apply to the etiquette generations apply to cell phone use. While the communicator's characteristics may constitute the generation a cell phone user is from, how that person perceives the context and relationship of those surrounding him or her during cell phone use may have an influence on perceptions of cell phone etiquette.

The following study will hypothesize based on the following literature review that there are distinct generational differences regarding cell phone use. The primary predictions of this study are as follows:

H1: Millennial generation cell phone users are more dependent on their cell phones than the Baby Boomer generation.

Dependency here will constitute to what degree a cell phone user desires or needs his or her cell phone or worries when unable to access his or her cell phone.

H2: Millennial generation cell phone users use their cell phones for more purposes than the Baby Boomer generation does.

More purposes here will constitute cell phone usages beyond that of basic cell phone functions such as talking or texting. Content could include accessing email, watching videos, reading news, or playing games among various other types of mass media content.

H3: Millennial generation cell phone users have less stringent concepts of cell phone etiquette than do Baby Boomer cell phone users.

Concepts of cell phone etiquette constitute the degree to which a particular person agrees with or against using a cell phone in a given context.

The Theoretical and Practical Significance of the Present Study

Some studies have focused on specific Millennial use of the modern cell phone (Gurrie & Johnson, 2011; Kroski, 2008; Lenhart, Ling, Campbell, & Purcell, 2010; Shin, 2009; Stam & Stanton, 2004). Still there are few studies that simultaneously focus on cell phone use of the Baby Boomer generation and compare it to that of the Millennials.

Theoretically, this will allow for an analysis of generational differences on the attitudes towards and uses of one of the most wide spread communication devices. As the cell phone has gained popularity, it has become ingrained in the upbringing of the Millennial generation and more an adoption for that of the older Baby Boomer generation. Baby Boomers have grown up much of their lives without knowing such a device. How these two different generations, in two different points in time, use this device may have important implications as to how generational theory applies to how this device is used. Furthermore, this study will examine uses, gratification, and dependency theory in regards to how these two generations utilize the device.

Another issue of important concern is that of cell phone etiquette. Though many opinion articles have been published concerning cell phone etiquette, very few studies have been conducted to apply any grounded scientific theory against etiquette (Bosker, 2010; Elgan, 2010; McKay, 2010). Through concepts in the theory of expectancy violations, this study will hope to study etiquette in terms of context, relationships between generations. For the large part, past studies have focused mainly on the Millennial generation's use of cell phones (Gurrie & Johnson, 2011; Kroski, 2008; Lenhart, et al., 2010; Shin, 2009; Stam & Stanton, 2004). This study will expand that focus to another generation and draw comparisons and conclusions based on cell phone use and etiquette.

Literature Review

Numerous past studies have focused on two key concepts involved in this study. Those are the theory of uses and gratification and the theory concerning generational differences. Fewer studies and articles have focused on the concept of cell phone etiquette. Especially as cell phones have continued to rise in popularity, they have too become a device many might think they could not live without (Walsh, 2010). As the following literature review explores these three key concepts, hypotheses have been proposed in respect to gaps in the literature.

Generational Theory

Many scholars acknowledge differences in characteristics and lifestyles across various generations (Busch, Venkitachalam, & Richards, 2008; McGuire, Todnem By, & Hutchings, 2007; Smola & Sutton, 2002; Tomkiewicz & Bass, 2008; Twenge & Campell, 2008; Westermann & Yamamura, 2007). Four main generations have evolved throughout the research conducted on generations and include: Veterans, Baby Boomers, Generation X and Millennials or Generation Y (Dainton & Zelle, 2010). While exact years of birth vary across researchers, they are all relatively close in proximity to one another. Dainton and Zelle (2010) proposed reasonable years by which to classify people to these generations. Dainton and Zelle (2010) proposed the birth years to be between 1922 and 1945 for Veterans, between 1946 and 1964 for Baby Boomers, between 1965 and 1980 for Generation X, and between 1980 and 2000 for Millennials or Generation Y based upon the research of aforementioned generational researchers.

While generational theory may seem to be a bunch of generalizations about people born in a particular time frame, Twenge and Campbell (2008) suggested that generations are influenced and formed in regards to several factors. Those factors can include certain events that occurred. For instance World War II influenced the Veteran generation in ways similar or dissimilar to the Millennial generation experiencing the death of Osama bin Laden. Twenge and Campbell (2008) also pointed towards parenting roles transforming generations as well as the media and popular culture. Dainton and Zelle (2010) called these different generations “different cultures” with respect to their “different values, beliefs, ways of behaving, and ways of communicating” (p. 195). Though different generations have been found to hold different values, Smola and Sutton (2002) found that a person’s values may evolve over time as the person ages and matures.

While four main generations exist, the purpose of this study will focus on comparing two generations in particular. Those generations are the Baby Boomers born between the years of 1945 and 1964 and Generation Y or the Millennials born between the years of 1980 and 2000. This study seeks to compare these two generations due to the time existing between them. While modern day smart phones were unavailable to the Baby Boomer generation during their youth, the device was adopted as opposed to existing in part of an upbringing as in the case of the Millennial generation. While generational theory has shown differences in attitudes and lifestyles of Baby Boomers and Millennials, this study will hope to draw comparisons between these generations in regard to their uses and perceptions of etiquette regarding cell phone use.

There is also a connection between these two generations. As Twenge and Campbell (2008) discussed parenting roles transforming a generation, it is important to consider that many Millennials were raised by the Baby Boomer generation (Casserly, 2012). So while these two generations spent many years together in the same households, the value they have placed on technology and more specifically the cell phone has been said to differ drastically (Casserly, 2012). This study will seek to find whether the Baby Boomers had a strong enough influence on their offspring to produce similarities in etiquette on a new age device. This study will also seek to find differences or similarities in usages of this device between these two generations.

Millennials. If the Millennial generation was to be defined by specific factors such as Twenge and Campell (2008) suggested, then the prosperity of this group's youth may have an effect on the Millennial mentality and outlook on life. Baiocchi (2007) noted the economic boom and age of prosperity that resonated through the young lives of the Millennial generation. As a result, Millennials grew up in an age where times were good and the generation's Baby Boomer parents were finding financial success and maintaining an outlook on life involving mostly that of an optimistic nature (Baiocchi, 2007). Strauss and Howe (2000) found teenagers in this generation to have a more positive outlook on life when compared to other generations. This could be an effect of the easy going and economically prosperous times this generation grew to know as the norm.

In terms of values and attitudes, the Millennial generation has been known to be rebellious in nature (Strauss & Howe, 2000). This may have an indication in terms of how Millennials respect social norms and the unwritten laws relating to cell phone etiquette. If their rebellious nature means ignoring social acceptability, this study may have results indicating so. If on the other hand, the Millennials demonstrate a high degree of an understanding of cell phone etiquette, the results will provide an interesting conflict against this aspect of generational theory.

Strauss and Howe (2000) noted the importance of understanding that Millennials are not unlike previous generations that have rebelled or identified against the values of the generations preceding their own. Based on previous research findings, Dainton and Zelle (2010) declared the Millennial generation's degree of loyalty low when compared to other generations. This may very well tie in with the concept of Strauss and Howe (2000) which indicated that a young generation is inclined to be rebellious and therefore likely simultaneously lacking in loyalty.

One thing the Millennial generation is sure of is its need for connection and inclusion in social circles (Dainton & Zelle, 2010). Growing up in the age of the largest technological advancements in history, there is little surprise that the Millennial generation grew up with and likely dependent on the communication technology available to them. The Internet boom started in the early 1990s soon to be followed by cell phones, social networking sites, and even more advanced capabilities showing up in the palms of hands on cell phones. As a result, the Millennial generation grew up accustomed to the instant response time and expectation of quick communication among

friends, family, and others. Skiba and Barton (2006) found that the Millennial generation finds satisfaction with the immediacy of this technology. Millennials expect instant feedback and prefer smaller amounts of time for response (Skiba & Barton, 2006). This desire for quick response and satisfaction with immediacy of the cell phone may indicate a dependency for the device. To think how one would react to losing a cell phone and instantly losing his or her ability to access content and his or her friends is an interesting concept that may differ between Millennials and Baby Boomers.

As the Millennial generation seeks cell phones in order to satisfy its desire for immediate gratification and connection, the Baby Boomer generation exhibits characteristics that may suggest differences in the way their generation may handle the communication device that is the cell phone. Those differences are examined below starting with the Baby Boomer generation.

Baby Boomers. As Strauss and Howe (2000) described the Millennials as rebels, Lancaster and Stillman (2002) offered that the Baby Boomers shared similar characteristics during their adolescent stages. Once again as Twenge and Campbell (2002) suggested events and situations could shape the attitudes of a generation, the Baby Boomers saw great days of struggle and especially days of protest. As Baiocchi (2007) suggested, the Baby Boomers saw the days of civil rights movements, women's rights movements, anti-war protests, and a growing concern for the safekeeping of the environment. This culture also evolved in the age of protest music during the 60s, which may have ingrained a sense of rebellion in their culture.

From a social perspective, the Baby Boomer generation did not have the luxury of advanced technology like the Millennials for the use of communication. Dainton and Zelle (2010) gathered that the Baby Boomer generation's communication style favored face-to-face communication and physical meetings. Lancaster and Stillman (2002) found that Baby Boomers still recognize and remember a world before computers and as a result, find it difficult to adapt to the constantly evolving technological social space.

Researchers have also found and agreed upon the Baby Boomers as a self-centered generation in that they seek self-fulfillment (Baiocchi, 2007; Dainton & Zelle, 2010). Smith and Clurman (1997) even went so far as to deem Baby Boomers the "me" generation. Unlike the Millennials in this case, the Baby Boomers are much less focused on what is happening around and about them and instead focused on achieving satisfaction in their immediate surroundings. This may suggest a lack of necessity and dependency on a device such as the cell phone seeing as how the cell phone offers more than what is necessary for a member of the Baby Boomer generation. While the modern cell phone offers a wide variety of mass media functions, Baby Boomers may find these features to be irrelevant or unnecessary due to their focus on self-fulfillment and their immediate surroundings. Baby Boomers may instead be more interested in the simplest of cell phone functions such as calling, especially compared to the Millennial generation.

Generational comparison. Previous research has confirmed the uses of cell phones in respect to Millennials' desire to feel included and engage in an extended social circle (Ling, 2004; Peters & ben Allouch, 2005; Walsh & White, 2006). Lee (2006) attributed this notion to the fact that Millennials have far more motives for cell phone use

than do other generations. One of those motives may be the social pressure and need to adapt to this type of communication behavior. Lee's (2006) notion of Millennials' cell phone motives ties in with the theory of Diffusion of Innovation (Roger, 1995; Sullivan, 2009).

Diffusion of innovation theory. Rogers' (1995) theory discussed the process in which social systems adapt new technology or innovation in general. Sullivan (2009) laid out the theory in two parts: the four aspects of the diffusion process and the five steps from innovation to adoption. The four aspects of the diffusion process include: the innovation, the channels of communication, time, and the social system (Rogers, 1995; Sullivan, 2009). The five steps from innovation to adoption include: becoming aware of an innovation, forming an attitude about the innovation, weighing the decision of whether or not to accept the innovation, trying the innovation, and finally adopting or rejecting the innovation (Rogers, 1995; Sullivan, 2009). Rogers (1995) noted that much of the process is dependent upon communication between members of the social system.

Diffusion of Innovation theory may be helpful in explaining how and why these different generations may be accepting the innovation of cell phone technology the way that they are, especially considering Rogers' (1995) conclusion about interpersonal communication playing a role in innovation acceptance. As Skiba & Barton (2006) noted Millennials are already engaging each other with low response times. With this in mind, Millennials may have a leg up on rates of innovation adoption while Baby Boomers may be slower to adopt while lagging behind in rates of interpersonal communication (Rogers, 1995).

While some research has found that it is almost necessary that Millennials have an understanding of how cell phone communication technology works, Krohn (2004) found that the Baby Boomer generation still has many members that have yet to master the use of this technology. With respect to generational theory and Jin's (2010) findings, this is surprising seeing as how the Baby Boomer generation is known for favoring face-to-face communication. Jin (2010) found that people who are more likely to interact face-to-face were more likely to interact on cell phones than those who were unlikely to communicate face-to-face. This concept of face-to-face communication brings about another important aspect of this study.

As cell phone use continues to increase, so does it seem that the rules of social exchanges are changing. It may be surprising to find someone that has never experienced a cell phone interrupting a face-to-face interaction in some fashion. This cross-path of face-to-face and cell phone communication brings into play the concept of social cell phone etiquette that is currently far from an agreed upon practice. This etiquette stems from cell phone users' desire to use the cell phone for its wide range of uses.

Uses and Gratification Theory

Uses and gratification theory supposes that humans have basic needs or desires that can be satisfied through the consumption of specific media (Pearce, 2009). Furthermore, individuals are active seekers of information and engage in media consumption at a high rate (Leung, 2009). Once an individual has found a particular medium or media that he or she is satisfied with, he or she may use that medium as a default for satisfying specific needs (Pearce, 2009). The concept is strait forward in that

an individual will use a medium that satisfies his or her need for gratification. Mehiabian (1971) offered the concept of immediacy regarding uses and gratification in that people will likely gravitate towards sources they find preferable. Conversely those people will gravitate away from sources they find to be unsatisfying (Mehiabian, 1971).

There are different ways in which a person may seek gratification. McQuail (1987) proposed four main categories of gratification that included: entertainment, information, personal identity, and personal relationships and social interaction. These four types of gratifications can be satisfied through different media. However, since the evolution of smart phones has occurred, it may be possible that a smart phone may be the key to satisfying each of these four types of gratification as described by McQuail (1987).

It is important to consider this theory in regards to the needs and fulfillment of those needs that are based on an individual and personal level (Dainton & Zelley, 2010). Though everyone seeks gratification, not everyone may seek gratification or satisfaction in a similar fashion. Katz, Blumler, and Gurevitch (1973) suggested the notion that humans have free will and therefore are capable of making explicit choices in terms of the information they seek and the media they choose as a means to that information. Though this was suggested quite some time ago, it is even more evident today, as technology has opened the door to more media options. The channels through which an individual can satisfy his or her needs has no doubt increased as technological platforms and media channels have increased over years passed (Ruggiero, 2000). Mobile devices litter the contemporary channels through which people may access information.

Smart phones especially have developed out of the gradual technological advancements where people have desired more immediate access to information and to each other (Underwood, Rosen, More, Ehrenreich, & Gentsch, 2012). Texting, video chatting, voicemail, and e-mail come on many smart phones available on the market. It seems difficult now to remember a time where these features were not available in the palm of one's hand. As cell phone customers have grown accustomed to these features of the modern cell phone, the features and accessibility have become ingrained in the culture of those using them. It seems checking one's cell phone could be second nature. As a result it is important to examine how this constant contact and accessibility differs in terms of usage when comparing the Baby Boomers who acquired the technology as opposed to the Millennials who grew up with it.

Content and process. While uses and gratification theory is used at a general level as mentioned beforehand, there are many scholars that have addressed the theory in a deeper regard. One such aspect of the theory concerns the issue of an individual's needs in regard to needing the content the medium communicates or needing the process of engaging the medium (Zeng, 2011). This dichotomous view of the theory suggests that both the instrument used to seek information and the information itself can satisfy a person's needs.

Loonis, Apter, and Sztulman (2000) acknowledged uses and gratification in terms of the process by suggesting technological addictions resulting from specific media use. Through habitual exposure to an instrument or process, a person may find that instrument to be a primary source of pleasure and become increasingly focused on that instrument

(Loonis et al., 2000). The contemporary cell phone or smart phone can certainly fall into the category of a process of uses and gratification. The smart phone's seemingly instant input and output function and two-way communicative technology offer individuals a process that appeals to the concept of instant gratification (Kaye & Johnson, 2002). Many smart phones are so equipped with different functions now that the act in of itself of using a smart phone can be enjoyable. It is the act of enjoying the medium in of itself that constitutes the gratification in respect to the instrument or process (Song, Larose, Eastin, & Lin, 2004). This concept may be useful to this study in that understanding how much someone uses a cell phone may predicate the extent to which that person grows dependent on the cell phone as a medium.

Another concept closely related to that of the process function of uses and gratification involves dependency and expectations from a habitually practiced process.

Dependency and expectation confirmation theory. When a person finds a particular medium to be especially gratifying or satisfying, he or she may develop a dependency for that medium (Pearce, 2009). Perceptions an individual may hold about a medium regarding its ease of use and usefulness are a part of the gratification turning towards a possible dependency an individual may develop for a medium (Shin, 2009). Shin (2011) discussed the concept of expectations resulting from gratification. When an individual understands that a certain medium satisfies his or her needs, he or she may expect that medium to continue to satisfy needs in the future. It is therefore through continued expectations and confirmations of satisfaction and gratification that a user may intentionally continue to use a certain medium (Oliver, 1980). This theory concerning

dependency might help in explaining a person's habitual checking of his or her phone.

The cell phone is almost as vital to many people as much as is their need to breathe. Cell phones go everywhere with their owners. They are used to check the time, glance at the weather, or to check as nothing more than a nervous habit. The use of cell phones has become so habitual that it is necessary to understand how dependent cell phone users are on this device.

The need to be constantly connected and in touch with friends, family or other important personnel has evolved with technology and the cell phone allows people to satisfy that need (Hostut, 2010). With the wide range of features available now on phones, people expect to be able to connect with each other whenever and wherever they choose. As a result some people consider the mobile phone to improve the quality of their social lives by keeping them constantly connected and included in their social circles (Ling, 2004; Peters & ben Allouch, 2005; Walsh & White, 2006). But just who exactly benefits the most from a cell phone? Businessmen and women are more connected just as the youth has become more closely connected within their networks of friends. While it has already been established that Millennials and Baby Boomers have been oriented differently to the uses of a cell phone, how these two generations compare in terms of how they use their cell phones still remains unexamined.

Uses and gratification theory explained how people seek to use certain media to access and satisfy their certain communication needs. Part of this theory also considers the dependency that may evolve as users are pleased with the medium they use to access their communication needs. While this study seeks to establish a sound comparison

between Millennial and Baby Boomer cell phone user, it also seeks to establish a comparison of these two generations' views on cell phone etiquette.

Expectancy Violations Theory

Based on the assumption that people have certain needs pertaining to personal space and affiliation, Burgoon (1978) developed this theory around the idea of having that personal space of affiliation with others violated. Similar to the *Britannica* definition of etiquette, this theory revolves around the expectation of norms and then how those unwritten norms are either agreed with or violated by other people. Dainton and Zelle (2010) noted that this theory is primarily concerned with violations of nonverbal space, but behavioral norms can also fall under the umbrella of this theory. Behavioral norms such as cell phone use in a social context could fall under this theory in regards to how the theory is broken down and reconstructed.

Burgoon (1978) developed Expectancy Violations Theory along with three core concepts including expectancy, violation valence, and communicator reward valence. While one has expectations of how a situation should go or how one should act, sometimes those expectations are broken. The violation valence refers to the evaluation and individual makes about a certain behavior (Dainton & Zelle, 2010). This could include how one might evaluate the use of cell phones in a particular context. Of particular importance and concern in regards to this theory's application to cell phone etiquette falls under the concept of expectancy which is broken down into three more categories including context, relationship, and communicator characteristics (Dainton & Zelle, 2010). Cell phone use can be applied to expectations of social behavior by

enveloping these three sub categories. Context can play a role in cell phone etiquette in that there may be certain contexts where cell phone use is appropriate or inappropriate. For example walking down the street and talking on a cell phone might be more acceptable than talking on a cell phone in an elevator. Furthermore maybe texting while with a group of friends may be more acceptable than texting while sitting in on a meeting at work with one's co-workers.

Dainton and Zelley (2010) discussed Burgoon's (1978) second concept being the relationship. When applying this to cell phone etiquette, one could think of the appropriateness of interrupting a face-to-face conversation and taking a phone call based on the relationship of the persons engaged in the face-to-face conversation. While the general consensus seems to be that interrupting a face-to-face conversation is rude, people are still doing it (Bosker, 2010; Elgan, 2010). Focusing on this concept in regard to a generational stance is therefore an integral part of this study. Understanding the importance the Baby Boomers place on cell phones and how they're used may differ compared to Millennials due to the way the phone is used and who is using the cell phone. For example would a son or daughter be more or less willing to take a phone call and interrupt a face-to-face conversation with his or her parents than vice versa? This is where the final concept of communicator's characteristics would come in. Dainton and Zelley (2010) describe this concept in regards to sex, age, and ethnicity.

EVT generally states that there are unwritten laws in regard to how we should act and how we are expected to act (Burgoon, 2009). As a result, those expectations are violated when "the actor's behavior deviates from those general patterns" (Burgoon,

2009). Understanding how cell phone users and different generations expect each other to act in regards to cell phone use may have interesting implications for cell phone etiquette. For example the generational characteristics of the Baby Boomers in regards to their respect for a face-to-face conversation may suggest how a Baby Boomer might consider it to be rude to interrupt a face-to-face conversation with a cell phone. However, cell phone obsessed millennial generation may have no qualms with this behavior at all. For example, one Millennial member wrote, “If I'm out with a group of friends, we all usually have our phones out and will reply to texts if we get them. We still have good conversations and a text here and there doesn't bother me. But then again, I'm 22. I think things are a little different in my age group” (Whatyousay, 2012, p.1).

Connecting back again to Twenge and Campbell's (2008) understanding of parents shaping the values of the generations they produce could play a factor here. If the Millennial generation uses cell phones a certain way and is simultaneously drawing new lines for etiquette, the generations following the Millennials may be influenced by these Millennial actions. Comparing these two generations' perceptions of etiquette will be an important part in defining the current values in place and may indicate the evolution of technology use and etiquette.

Cell Phone Use

While research has begun to focus on the uses and value of cell phones in contemporary society, some researchers have also evaluated how specific groups of people use and value this tool (Jin, 2010; Ling, 2004; Madell, 2007; Nurullah, 2009). Especially in regard to the high use of the Millennial generation, much of the research has

focused on how teens and young people are using their cell phones every day and everywhere. Gurrie and Johnson (2011) addressed the crazed concern of student cell phone use in the classroom. They found that students were more likely to use their cell phones based on the interest they had in their professor. The more interesting the professor, the less students would use their cell phones and vice versa (Gurrie & Johnson, 2011). Lenhart, Ling, Campbell, and Purcell (2010) discovered some interesting statistics on teen cell phone use. One finding that was of great interest was that the teens that participated in the study communicated more frequently with his or her peers via text messaging compared to face-to-face communication. To think of communicating with a cell phone more frequently than face-to-face places a whole new level of importance on the cell phone in the Millennial generation's communication habits. This may also have implications in regard to etiquette. If some Millennials are engaging friends or family more on their cell phones than face-to-face, it may so happen that mobile communication becomes the norm for Millennials. In such a case other forms of communication may fall behind cell phones in terms of importance. Examining how Millennials handle cell phones in other social contexts will help determine the value they place on this device for communicative purposes.

While the actual content of communications can vary, the cell phone and especially text messaging has been found to offer a wide array of good communicative habits such as: micro-social planning, scholarly exchanges, and information seeking and exchange (Guan & Subrahmanyam, 2009; Subrahmanyam & Greenfield, 2008). It will be interesting to see how this trend continues as some research has suggested that excessive

texting is more of a teenager “life phase phenomenon” that will not likely last (Ling, 2010, p. 277).

How phones are being used and the etiquette or lack-there-of when using them has been brushed upon by some of these past studies. The fact that students feel using a cell phone in class may be acceptable might appear to be inexcusable to those in the Baby Boomer generation.

Based on the literature concerning generational theory, uses and gratification, and expectancy violations theories among others, the following hypotheses were tested in order to contribute to the gaps in cell phone research concerning a generational comparison between Baby Boomers and Millennials on cell phone uses and etiquette.

H1: Millennial generation cell phone users are more dependent on their cell phones than the Baby Boomer generation.

H2: Millennial generation cell phone users use their cell phones for more purposes than the Baby Boomer generation does.

H3: Millennial generation cell phone users have less stringent concepts of cell phone etiquette than do Baby Boomer cell phone users.

Method

Sampling

Participant profile. Participants for the current study were based on two separate demographics in concern to generational theory. Millennial participants were cell phone users born between the years of 1980 and 2000. Baby Boomer participants were cell phone users born between the years of 1946 and 1964. These years were based upon the generational analysis of Busch, Venkitchalam, and Richards (2008). The researcher planned to recruit approximately 300 participants, about 150 Millennial participants and 150 Baby Boomers. The final number of complete surveys collected included 160 Millennials and 177 Baby Boomers as shown in Table 1.

Participant recruitment and access. Participants were recruited through various means. The Millennial sample was able to access the survey through a Facebook group, which provided a link to the survey. Snowball sampling was employed. The Millennial sample was asked to mention the survey to other Millennial members as well as anyone they may know belonging to the Baby Boomer generation.

The Baby Boomer generation sample was also sought after by snowball sampling. Surveys were distributed to Baby Boomer generation participants via email in addition to the Facebook group with directions to forward the survey to other Baby Boomer acquaintances. Millennials were asked to send emails to Baby Boomers with the link included. Several Baby Boomers forwarded these emails out around their places of work.

Data Collection Procedures

Data was collected through obsurvey.com. Links were posted online through Facebook and sent through email chains. Links were distributed through places of work among the Baby Boomer population and in some instances by the Millennial generation as well.

Survey Protocol (Instrument)

Surveys were the primary instrument for this study. Macias, Springston, Lariscy, and Neustifter (2008) found surveys to be a particularly important research method in the communication field. The survey for this study can be found in Appendix A. Three sections exist in the survey. The first section included questions concerning cell phone dependency. The second section included questions concerning the content that the participant used a cell phone to access. The final section included questions concerning cell phone etiquette. Aside from these three main sections, the survey began by asking participants to indicate whether they were a Millennial or Baby Boomer as not to have other generations or ages participating in the survey. Demographic and background questions were included at the end of the survey to gain a better understanding of the sample audience as well as to build a demographic profile for the study. A few open-ended questions were also included at the conclusion of the survey in order to gain more insight from the participants. Shkedi (2004) mentioned qualitative data collection as a way to better understand attitudes, but warned about criticisms of qualitative research tending to focus on smaller groups. This study implements both quantitative and some qualitative measures for a better-rounded data collection procedure.

The majority of questions were structured in a seven-point Likert-type scale style. An example of a question from the first section addressing cell phone dependency is “If you lost your cell phone, how worried would you be?” The participants then indicated one being “not worried at all” to seven being “very worried”. An example question from the second section addressing cell phone uses is “On an average day, how many texts do you send?” The participants then indicated one being “Never” to six being “41+” with other intervals included in between. An example from the third section addressing cell phone etiquette is, “Imagine how appropriate checking your phone while out to dinner with family would be”. The participants then indicated one being “very inappropriate” to seven being “very appropriate”.

At the end of the survey, respondents were given the opportunity to answer three open-ended questions. The questions asked what aspect of cell phone etiquette the respondent felt people break most, if the respondent had ever communicated his or her feelings to someone breaking cell phone etiquette, and lastly what the respondent felt the most important function of the modern cell phone is.

Data Analysis Techniques

Upon completion of the surveys, data was entered in a Microsoft Excel sheet and then imported into SPSS. From there a statistical analysis was run to evaluate the relationship between the Millennial and Baby Boomer generations regarding cell phone dependency, use, and etiquette. Before comparing means of the two independent variables, a reliability check was performed using Cronbach alpha. Those items having a Cronbach alpha greater than .7 were considered to be reliable measures and kept for

analysis. Independent sample t-tests were used to determine statistically significant or insignificant differences between the Baby Boomer and Millennial generation in regards to these cell phone dependencies, uses, and etiquette. The t-test was helpful in comparing means of each group's cell phone habits. Results were examined to ensure *p* values indicated statistical significance.

T-tests were run in order to provide a more thorough analysis of the generational comparisons on cell phone dependency, usage, and etiquette. The dependent variables used to compute the variables of dependency and etiquette were also tested individually using an independent t-test. Each dependent variable within dependency, usage, and etiquette was tested and compared between the generations.

Following the SPSS analyses, answers to open ended questions were analyzed via a content analysis. Chen (2012) noted the importance of content analyses being “systematic and objective” in analyzing media related content (p. 66). Certain trends throughout these answers were analyzed and coded into different variables. The question asking what aspect of etiquette was broken most frequently included the following codes: don't know, breaking face to face communication, checking the cell phone constantly, talking loudly, not silencing the cell phone, using phone while driving, discussing personal matters in public, ignoring or disregarding the moment, using phone at a meal, using phone at business meeting, not responding immediately, and ignoring no cell phone rules.

The second question asking if the respondent had ever communicated his or her feelings to someone breaking cell phone etiquette included the following codes: no

answer, don't speak out, joking or sarcastically saying something, making a direct statement, sometimes saying something, saying something to family, saying something to a stranger, saying something to a spouse or significant other, saying something to a co-worker, saying something to a friend, and giving a look.

The last question asking about the respondent about the most important function of the modern cell phone included the following codes: The respondent didn't know or had no answer, the respondent mentioned communication, the respondent mentioned using it for emergencies, the respondent mentioned internet, the respondent mentioned calling, the respondent mentioned texting, the respondent mentioned navigation, the respondent mentioned being able to access news, the respondent mentioned its use for business purposes, the respondent mentioned email, the respondent mentioned scheduling, and the respondent mentioned immediacy.

Measures

Demographics. Respondents were asked to provide some information about them including which generation they belonged to, sex, ethnicity, their current living situation, and marital status.

Dependency. Participants were asked to report their overall dependency on cell phones through use of a seven point Likert scale. Respondents were asked how worried they would be in a certain condition including losing a cell phone, a battery dying, no reception, and completely damaging a phone. Respondents were also asked how dependent they thought they were on their cell phones and how dependent they were compared to other people their age. Respondents were also asked how frequently they

checked their cell phones, how difficult it would be to live their current lifestyle without a cell phone, and how critical of a role a cell phone played in their lives. The Likert items addressed the issue of cell phone dependency. The Cronbach alpha for this measure was .923.

Cell phone usage. Participants were asked to report how often they used their cell phones for specific usages through use of a six-point scale. Respondents were asked the following in regard to cell phone usage: how many videos are watched each day, how many articles are read each day, how many photos are viewed each day, how many photos are taken each day, how many songs are listened to each day, how many games are on a phone, how many emails are read each day, how many emails are sent each day, how many times Facebook is checked each day, how many times Twitter is checked each day, how many texts are received each day, how many text are sent each day, and how many apps are on a phone. These items addressed the issue of cell phone usage.

Participants were also asked to rate how important specific functions of a cell phone were to him or her. Participants rated several variables on a seven-point Likert scale. These functions included: gaming, voice calling, texting, social media, email, GPS, music, camera, and Internet.

Cell phone etiquette. Participants were asked to report how inappropriate or appropriate it was to use a cell phone in certain contexts through use of a seven point Likert scale. Respondents were asked how appropriate it was to interrupt time with family, friends, a date, and a co-worker by answering a phone call while out to dinner. Respondents were asked how appropriate it was to interrupt time with family, friends, a

date, and a co-worker by checking a cell phone while out to dinner. Respondents were asked how appropriate it was to interrupt a face-to-face conversation with family, friends, a date, and a co-worker by answering a phone call. Respondents were asked how appropriate it was to interrupt a face-to-face conversation with family, friends, a date, and a co-worker by checking a cell phone. These items addressed the issue of cell phone etiquette. The Cronbach alpha for this measure was .947.

Results

Descriptive Statistics

The sample consisted of 337 participants between the ages of 18 and 34, and 46 and 68. A break down of generation frequencies is listed in Table 1. A break down of sex frequencies is listed in table 2. A break down of ethnicity is listed in table 3. A break down of whom participants live with is listed in table 4. A break down of participants' relationship statuses is listed in table 5.

Table 1.

Generation Frequencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Millennial	160	47.5	47.5	47.5
	Baby Boomer	177	52.5	52.5	100.0
	Total	337	100.0	100.0	

Table 2.

Sex Frequencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	142	42.1	42.1	42.1
	Female	195	57.9	57.9	100.0
	Total	337	100.0	100.0	

A crosstab test was run to determine whether there was a difference between the generations in the frequency of male and female participants. About 47% of Millennial

participants were men ($n = 76$) and about 53% were females ($n = 84$). About 37% of Baby Boomer participants were men ($n = 66$) and about 63% were females ($n = 111$). There was no statistically significant difference between the generations. A Chi-square test was run to test the difference $\chi^2(1, N = 337) = 3.59, p = .058$. Table 3 shows the frequencies of each group.

Table 3.

Ethnicity Frequencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Caucasian	316	93.8	93.8	93.8
	Black	7	2.1	2.1	95.8
	Asian	4	1.2	1.2	97.0
	Hispanic	5	1.5	1.5	98.5
	none of your business	1	.3	.3	98.8
	mix	3	.9	.9	99.7
	Semite	1	.3	.3	100.0
	Total	337	100.0	100.0	

A crosstab test was run to determine whether there was a difference between the generations in the frequency of participants of specific ethnicities. About 91% of Millennial participants were Caucasian ($n = 146$), while the other 9% consisted of Black ($n = 4$), Asian ($n = 3$), Hispanic ($n = 5$), none of your business ($n = 0$), mix ($n = 2$), and Semite ($n = 0$) participants. About 96% of Baby Boomer participants were Caucasian ($n = 170$), while the other 4% consisted of Black ($n = 3$), Asian ($n = 1$), Hispanic ($n = 0$), none of your business ($n = 1$), mix ($n = 1$), and Semite ($n = 1$) participants. There was no

statistically significant difference between the generations. A Chi-square test was run to test the difference $\chi^2 (6, N = 337) = 9.47, p = .149$.

Table 4.

Living Situation Frequencies

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid nobody	35	10.4	10.4	10.4
family	69	20.5	20.5	30.9
roommates	64	19.0	19.0	49.9
romantic partner/spouse	112	33.2	33.2	83.1
children	6	1.8	1.8	84.9
children and spouse	51	15.1	15.1	100.0
Total	337	100.0	100.0	

A crosstab test was run to determine whether there was a difference between the generations in regards to whom the participants lived with. About 12% of Millennial participants lived with nobody ($n = 19$), about 16% lived with family ($n = 26$), about 39% lived with roommates ($n = 63$), about 28% lived with a romantic partner or spouse ($n = 44$), none lived with children, and eight participants lived with children and a spouse. About 9% of Baby Boomer participants lived with nobody, about 24% lived with family ($n = 43$), one participant lived with a roommate, about 38% lived with a romantic partner or spouse ($n = 68$), six lived with children, and 24% lived with children and a spouse ($n = 43$). There was a statistically significant difference between the generations. A Chi-square test was run to test the difference $\chi^2 (5, N = 337) = 90.07, p < .000$. More

Millennial participants lived with roommates than Baby Boomers. Additionally, about 5 times as many Baby Boomers lived with children and a spouse than did Millennials.

Table 5.

Relationship Frequencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never been married	79	23.4	23.4	23.4
	married	162	48.1	48.1	71.5
	divorced	20	5.9	5.9	77.4
	widowed	6	1.8	1.8	79.2
	separated	2	.6	.6	79.8
	have boyfriend/girlfriend	68	20.2	20.2	100.0
	Total	337	100.0	100.0	

A crosstab test was run to determine whether there was a difference between the generations in frequency of participants' relationship statuses. About 44% of Millennial participants had never been married ($n = 70$), about 14% were married ($n = 23$), three were divorced, one was widowed, none were separated, and about 39% had a boyfriend or girlfriend ($n = 63$). About 5% of Baby Boomer participants had never been married, about 79% were married ($n = 139$), about 10% were divorced ($n = 17$), five were widowed, two were separated, and five had a boyfriend or girlfriend. There was a statistically significant difference between the generations. A Chi-square test was run to test the difference $\chi^2 (5, N = 337) = 193.74, p < .000$. About 7 times more Millennial participants had never been married than Baby Boomers. About 5 times more Baby

Boomers were married than Millennials. About 5 times more Baby Boomers were divorced than Millennials. About 12 times as many Millennials had boyfriends or girlfriends than Baby Boomers.

Cell Phone Dependency

Hypothesis one for the current study stated Millennial generation cell phone users are more dependent on their cell phones than the Baby Boomer generation. The independent sample t-test was run to test the hypothesis. The hypothesis was supported $t(335) = 3.32, p < .001$. Millennial participants ($M = 4.93, SD = .99$) were more dependent on their cell phones compared to Baby Boomer participants ($M = 4.45, SD = 1.55$).

In addition to these results, by individually testing the individual variables computed in the dependency variable, some interesting results were yielded.

Lost cell. The independent sample t-test was run to test the difference in how worried Millennials and Baby Boomers would be if they lost their cell phones. There was a significant difference between the generations, $t(335) = 3.21, p < .001$. Millennial participants ($M = 5.89, SD = 1.29$) felt they would be more worried than Baby Boomers ($M = 5.33, SD = 1.83$) if they lost their cell phones.

Battery dies. The independent sample t-test was run to test the difference in how worried Millennials and Baby Boomers would be if their cell phone batteries died midday. There was a significant difference between the generations, $t(335) = 4.19, p < .000$. Millennial participants ($M = 4.40, SD = 1.42$) felt they would be more worried than Baby Boomers ($M = 3.63, SD = 1.90$) if their cell phone batteries died midday.

No reception. The independent sample t-test was run to test the difference in how worried Millennials and Baby Boomers would be if they had no cell phone reception. There was no difference between the generations, $t(335) = 1.16$, $p = .246$.

Damage phone. The independent sample t-test was run to test the difference in how worried Millennials and Baby Boomers would be if they completely damaged their cell phones. There was a significant difference between the generations, $t(335) = 3.01$, $p = .003$. Millennial participants ($M = 5.66$, $SD = 1.46$) felt they would be more worried than Baby Boomers ($M = 5.11$, $SD = 1.88$) if they completely damaged their cell phones.

Self-assessment. The independent sample t-test was run to test the difference in how dependent individuals in the Millennial and Baby Boomer generations thought they were on their cell phones. There was a significant difference between the generations, $t(335) = 3.24$, $p < .001$. Millennial participants ($M = 5.33$, $SD = 1.18$) felt they were more dependent on their cell phones than Baby Boomers ($M = 4.78$, $SD = 1.81$).

Comparative assessment. The independent sample t-test was run to test the difference in how dependent individuals in the Millennials and Baby Boomers would be if they lost their cell phones compared to others in their same generation. There was a significant difference between the generations, $t(335) = 3.08$, $p = .002$. Millennial participants ($M = 3.46$, $SD = 1.31$) felt they would be more dependent than others in their same generation than Baby Boomers ($M = 3.97$, $SD = 1.68$).

Checking cell. The independent sample t-test was run to test the difference in how frequently Millennials and Baby Boomers felt they checked their cell phones. There was a significant difference between the generations, $t(335) = 4.97$, $p < .000$. Millennial

participants ($M = 5.23$, $SD = 1.31$) felt they checked their cell phones more frequently than Baby Boomers ($M = 4.31$, $SD = 1.96$).

Lifestyle. The independent sample t-test was run to test the difference in how difficult it would be for Millennials and Baby Boomers to live their current lifestyles without a cell phone. There was a significant difference between the generations, $t(335) = 2.86$, $p = .005$. Millennial participants ($M = 5.27$, $SD = 1.56$) felt it would be more difficult to live their current lifestyles without a cell phone than Baby Boomers ($M = 4.70$, $SD = 2.03$).

Critical role. The independent sample t-test was run to test the difference in how true Millennials and Baby Boomers thought it was that their cell phones play a critical role in their day-to-day lives. There was a significant difference between the generations, $t(335) = 3.51$, $p < .001$. Millennial participants ($M = 5.26$, $SD = 1.49$) believed it was truer that cell phones played a critical role in their day-to-day lives than Baby Boomers ($M = 4.58$, $SD = 2.00$).

Cell Phone Usage

Hypothesis two for the current study stated Millennial generation cell phone users use their cell phones for more purposes than the Baby Boomer generation does. Several independent sample T-tests and a Chi-square were run to test the hypothesis. The hypothesis was partially supported by all but one test.

Watching video. The independent sample t-test was run to test the difference in how many videos Millennials and Baby Boomers watched on their cell phones each day. There was a significant difference between the generations, $t(335) = 5.44$, $p < .000$.

Millennial participants ($M = 1.61$, $SD = .70$) watched more videos on their cell phones each day than Baby Boomers ($M = 1.21$, $SD = .67$).

Reading articles. The independent sample t-test was run to test the difference in how many articles Millennials and Baby Boomers read on their cell phones each day. There was a significant difference between the generations, $t(335) = 6.66$, $p < .000$. Millennial participants ($M = 2.39$, $SD = 1.29$) read more articles on their cell phones each day than Baby Boomers ($M = 1.53$, $SD = 1.09$).

Taking photos. The independent sample t-test was run to test the difference in how many photos Millennials and Baby Boomers took on their cell phones each day. There was a significant difference between the generations, $t(335) = 5.63$, $p < .000$. Millennial participants ($M = 2.05$, $SD = .57$) took more photos on their cell phones each day than Baby Boomers ($M = 1.69$, $SD = .60$).

Viewing photos. The independent sample t-test was run to test the difference in how many photos Millennials and Baby Boomers viewed on their cell phones each day. There was a significant difference between the generations, $t(335) = 9.29$, $p < .000$. Millennial participants ($M = 3.33$, $SD = 1.64$) viewed more photos on their cell phones each day than Baby Boomers ($M = 1.93$, $SD = 1.07$).

Listening to music. The independent sample t-test was run to test the difference in how many songs Millennials and Baby Boomers listened to on their cell phones each day. There was a significant difference between the generations, $t(335) = 10.49$, $p < .000$. Millennial participants ($M = 2.85$, $SD = 1.84$) listened to more songs on their cell phones each day than Baby Boomers ($M = 1.28$, $SD = .71$).

Gaming. The independent sample t-test was run to test the difference in how many games Millennials and Baby Boomers have on their cell phones. There was a significant difference between the generations, $t(335) = 7.09$, $p < .000$. Millennial participants ($M = 2.66$, $SD = 1.55$) have more games on their on their cell phones than Baby Boomers ($M = 1.61$, $SD = 1.15$).

Reading emails. The independent sample t-test was run to test the difference in how many emails Millennials and Baby Boomers read on their cell phones each day. There was a significant difference between the generations, $t(335) = 5.13$, $p < .000$. Millennial participants ($M = 4.26$, $SD = 1.82$) read more emails on their cell phones each day than Baby Boomers ($M = 3.11$, $SD = 2.23$).

Sending emails. The independent sample t-test was run to test the difference in how many emails Millennials and Baby Boomers sent on their cell phones each day. There was no difference between the generations, $t(335) = 1.13$, $p = .261$.

Checking Facebook. The independent sample t-test was run to test the difference in how many times Millennials and Baby Boomers check Facebook on their cell phones each day. There was a significant difference between the generations, $t(335) = 7.89$, $p < .000$. Millennial participants ($M = 2.76$, $SD = 1.49$) check Facebook on their cell phones more times each day than Baby Boomers ($M = 1.59$, $SD = 1.23$).

Checking Twitter. The independent sample t-test was run to test the difference in how many times Millennials and Baby Boomers check Twitter on their cell phones each day. There was a significant difference between the generations, $t(335) = 6.79$, $p < .000$.

Millennial participants ($M = 1.79$, $SD = 1.38$) check Twitter on their cell phones more times each day than Baby Boomers ($M = 1.05$, $SD = .45$).

Receiving texts. The independent sample t-test was run to test the difference in how many texts Millennials and Baby Boomers received on their cell phones each day. There was a significant difference between the generations, $t(335) = 9.69$, $p < .000$. Millennial participants ($M = 3.33$, $SD = 1.36$) receive more texts on their cell phones each day than Baby Boomers ($M = 2.16$, $SD = .82$).

Sending texts. The independent sample t-test was run to test the difference in how many texts Millennials and Baby Boomers send on their cell phones each day. There was a significant difference between the generations, $t(335) = 9.62$, $p < .000$. Millennial participants ($M = 3.28$, $SD = 1.38$) send more texts on their cell phones each day than Baby Boomers ($M = 2.10$, $SD = .84$).

Apps. The independent sample t-test was run to test the difference in how many apps Millennials and Baby Boomers have on their cell phones. There was a significant difference between the generations, $t(335) = 8.36$, $p < .000$. Millennial participants ($M = 4.29$, $SD = 1.73$) have more apps on their cell than Baby Boomers ($M = 2.68$, $SD = 1.81$).

Navigation. A Chi-square test was run to test which method the two generations would select for their primary navigation tool among a cell phone, GPS, printed, directions, or other. The sample included 59% of Millennials ($n = 94$) and 15% of Baby Boomers ($n = 27$) that selected the cell phone as their primary navigation tool. The sample also included 48% of Baby Boomers ($n = 85$) and 26% of Millennials ($n = 42$) who selected GPS as their primary navigation tool. The sample also included 20% of

Baby Boomers ($n = 36$) and 11% of Millennials ($n = 18$) who selected printed directions as their primary tool for navigation. These differences were significant $\chi^2 (5, N = 337) = 73.36, p < .000$). Belonging to the Millennial or Baby Boomer generation is associated with method selection for navigation purposes. Millennials chose the cell phone as their primary navigation tool about 3 times more than the Baby Boomers. Baby Boomers chose GPS and printed directions almost two times more than Millennials.

Function importance. In addition to these results, by individually testing the individual variables computed in the dependency variable, some interesting results were yielded. All t-tests indicated that Millennials rated the importance of all aspects listed as more important to their cell phone usage than Baby Boomers.

Gaming importance. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the importance of gaming to their cell phone usage. There was a significant difference between the generations, $t(335) = 5.75, p < .000$. Millennial participants ($M = 2.23, SD = 1.57$) rated gaming as more important than Baby Boomers ($M = 1.40, SD = 1.05$).

Calling importance. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the importance of calling to their cell phone usage. There was a significant difference between the generations, $t(335) = 2.25, p = .025$. Millennial participants ($M = 5.68, SD = 1.75$) rated calling as more important than Baby Boomers ($M = 5.16, SD = 2.39$).

Texting importance. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the importance of texting to their cell phone

usage. There was a significant difference between the generations, $t(335) = 6.53$, $p < .000$. Millennial participants ($M = 6.42$, $SD = .92$) rated texting as more important than Baby Boomers ($M = 5.26$, $SD = 2.07$).

Social media importance. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the importance of social media to their cell phone usage. There was a significant difference between the generations, $t(335) = 10.88$, $p < .000$. Millennial participants ($M = 4.53$, $SD = 1.95$) rated social media as more important than Baby Boomers ($M = 2.24$, $SD = 1.90$).

Email importance. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the importance of email to their cell phone usage. There was a significant difference between the generations, $t(335) = 6.00$, $p < .000$. Millennial participants ($M = 5.43$, $SD = 1.85$) rated gaming as more important than Baby Boomers ($M = 3.90$, $SD = 2.70$).

GPS importance. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the importance of GPS to their cell phone usage. There was a significant difference between the generations, $t(335) = 9.94$, $p < .000$. Millennial participants ($M = 4.96$, $SD = 2.03$) rated GPS as more important than Baby Boomers ($M = 2.71$, $SD = 2.11$).

Music importance. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the importance of music to their cell phone usage. There was a significant difference between the generations, $t(335) = 10.24$, $p <$

.000. Millennial participants ($M = 4.25$, $SD = 2.24$) rated music as more important than Baby Boomers ($M = 2.05$, $SD = 1.69$).

Camera importance. The independent sample T-test was run to test the difference in how Millennials and Baby Boomers rated the importance of a camera to their cell phone usage. There was a significant difference between the generations, $t(335) = 6.65$, $p < .000$. Millennial participants ($M = 5.36$, $SD = 1.62$) rated a camera as more important than Baby Boomers ($M = 4.00$, $SD = 2.09$).

Internet importance. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the importance of Internet to their cell phone usage. There was a significant difference between the generations, $t(335) = 9.66$, $p < .000$. Millennial participants ($M = 5.29$, $SD = 1.80$) rated Internet as more important than Baby Boomers ($M = 3.10$, $SD = 2.30$).

What do you think is the most important function of the modern cell phone and why? Twelve variables were coded for after analyzing the responses to this open-ended question. These codes included the following variables: The respondent did not know or had no answer, the respondent mentioned communication, the respondent mentioned using it for emergencies, the respondent mentioned internet, the respondent mentioned calling, the respondent mentioned texting, the respondent mentioned navigation, the respondent mentioned being able to access news, the respondent mentioned its use for business purposes, the respondent mentioned email, the respondent mentioned scheduling, and the respondent mentioned immediacy.

Don't know. The first crosstab test run concerned whether there was a difference between the generations in whether they did not have an opinion about important usage of the cell phone. The number of participants that did not have an opinion about important usage of the cell phone did not differ by generation $\chi^2 (1, N = 337) = 2.46, p = .117$.

Communication. The second crosstab test run concerned whether there was a difference between the generations in whether they mentioned communication as an important function of a cell phone. The number of participants that mentioned communication as an important function of a cell phone did not differ by generation. A Chi-square test was run to test if the generation did or did not mention communication $\chi^2 (1, N = 337) = 2.89, p = .089$.

Emergencies. The third crosstab test run concerned whether there was a difference between the generations in whether they mentioned use during emergencies as an important function of a cell phone. The sample included about 8% of Millennials ($n = 12$) and about 34% of Boomers ($n = 60$) that mentioned use during emergencies as an important function of a cell phone. The number of participants that mentioned use during emergencies as an important function of a cell phone differed by generation $\chi^2 (1, N = 337) = 34.86, p < .000$. Baby Boomers mentioned cell phone use during emergencies about 5 times more than Millennials.

Internet. The fourth crosstab test run concerned whether there was a difference between the generations in whether they mentioned Internet as an important function of a cell phone. The sample included about 12% of Millennials ($n = 19$) and about 3% of

Baby Boomers ($n = 5$) who mentioned Internet as an important function of a cell phone. The number of participants that mentioned Internet as an important function of a cell phone differed by generation $\chi^2 (1, N = 337) = 10.41, p < .001$. Millennials mentioned Internet as an important function of a cell phone almost 4 times more than Baby Boomers.

Calling. The fifth crosstab test run concerned whether there was a difference between the generations in whether they mentioned calling as an important function of a cell phone. The number of participants that mentioned calling as an important function of a cell phone did not differ by generation $\chi^2 (1, N = 337) = .06, p = .811$.

Texting. The sixth crosstab test run concerned whether there was a difference between the generations in whether they mentioned texting as an important function of a cell phone. The sample included 19% of Millennials ($n = 31$) and 10% of Baby Boomers ($n = 18$) who mentioned texting as an important function of a cell phone. The number of participants that mentioned texting as an important function of a cell phone differed by generation $\chi^2 (1, N = 337) = 5.73, p = .017$. Millennials mentioned texting almost two times more than the Baby Boomers as an important cell phone function.

Navigation. The seventh crosstab test run concerned whether there was a difference between the generations in whether they mentioned Navigation as an important function of a cell phone. The number of participants that mentioned navigation as an important function of a cell phone did not differ by generation $\chi^2 (1, N = 337) = 2.91, p = .088$.

News. The eighth crosstab test run concerned whether there was a difference between the generations in whether they mentioned accessing news as an important function of a cell phone. The number of participants that mentioned accessing news as an important function of a cell phone did not differ by generation $\chi^2 (1, N = 337) = 2.23, p = .136$.

Business. The ninth crosstab test run concerned whether there was a difference between the generations in whether they mentioned business purposes as an important function of a cell phone. The number of participants that mentioned business purposes as an important function of a cell phone did not differ by generation $\chi^2 (1, N = 337) = .16, p = .901$.

Email. The tenth crosstab test run concerned whether there was a difference between the generations in whether they mentioned email as an important function of a cell phone. The number of participants that mentioned email as an important function of a cell phone did not differ by generation $\chi^2 (1, N = 337) = 1.27, p = .259$.

Scheduling. The eleventh crosstab test run concerned whether there was a difference between the generations in whether they mentioned scheduling as an important function of a cell phone. The number of participants that mentioned scheduling as an important function of a cell phone did not differ by generation $\chi^2 (1, N = 337) = 3.35, p = .067$.

Immediacy. The twelfth crosstab test run concerned whether there was a difference between the generations in whether they mentioned immediacy as an important function of a cell phone. The number of participants that mentioned immediacy

as an important function of a cell phone did not differ by generation $\chi^2(1, N = 337) = 2.88, p = .090$.

Cell Phone Etiquette

Hypothesis three for the current study stated Millennial generation cell phone users have less stringent concepts of cell phone etiquette than do Baby Boomer cell phone users. The independent sample T-test was run to test the hypothesis. The hypothesis was supported $t(335) = 4.88, p < .000$. Millennial participants ($M = 2.76, SD = 1.09$) had less stringent concepts of cell phone etiquette than Baby Boomer participants ($M = 2.17, SD = 1.16$).

Etiquette context. In addition to these results, by individually testing the individual variables computed in the dependency variable, some interesting results were yielded.

Taking a call while at dinner with family. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of taking a call while at dinner with family. There was no significant difference between the generations, $t(335) = 1.69, p = .091$.

Taking a call while at dinner with friends. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of taking a call while at dinner with friends. There was a significant difference between the generations, $t(335) = 5.74, p < .000$. Millennial participants ($M = 3.34, SD = 1.59$) rated taking a call while at dinner with friends as more appropriate than Baby Boomers ($M = 2.35, SD = 1.58$).

Taking a call while at dinner with significant other. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of taking a call while at dinner with a significant other. There was no significant difference between the generations, $t(335) = 1.72$, $p = .086$.

Taking a call while at dinner with co-workers. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of taking a call while at dinner with co-workers. There was no significant difference between the generations, $t(335) = .018$, $p = .985$.

Taking a call while in a face-to-face conversation with family. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of taking a call while in a face-to-face conversation with family. There was a significant difference between the generations, $t(335) = 3.66$, $p < .000$. Millennial participants ($M = 2.55$, $SD = 1.55$) rated taking a call while in a face-to-face conversation with family as more appropriate than Baby Boomers ($M = 1.97$, $SD = 1.35$).

Taking a call while in a face-to-face conversation with friends. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of taking a call while in a face-to-face conversation with friends. There was a significant difference between the generations, $t(335) = 5.29$, $p < .000$. Millennial participants ($M = 2.84$, $SD = 1.60$) rated taking a call while in a face-to-face conversation with friends as more appropriate than Baby Boomers ($M = 1.98$, $SD = 1.36$).

Taking a call while in a face-to-face conversation with significant other. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of taking a call while in a face-to-face conversation with a significant other. There was no significant difference between the generations, $t(335) = 1.63, p = .103$.

Taking a call while in a face-to-face conversation with co-workers. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of taking a call while in a face-to-face conversation with co-workers. There was no significant difference between the generations, $t(335) = .43, p = .670$.

Checking a cell phone while at dinner with family. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of checking a cell phone while at dinner with family. There was a significant difference between the generations, $t(335) = 4.81, p < .000$. Millennial participants ($M = 3.14, SD = 1.60$) rated checking a cell phone while at dinner with family as more appropriate than Baby Boomers ($M = 2.33, SD = 1.49$).

Checking a cell phone while at dinner with friends. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of checking a cell phone while at dinner with friends. There was a significant difference between the generations, $t(335) = 8.73, p < .000$. Millennial participants ($M = 3.78, SD = 1.71$) rated checking a cell phone while at dinner with friends as more appropriate than Baby Boomers ($M = 2.28, SD = 1.43$).

Checking a cell phone while at dinner with a significant other. The independent sample T-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of checking a cell phone while at dinner with a significant other. There was a significant difference between the generations, $t(335) = 3.89, p < .000$. Millennial participants ($M = 2.90, SD = 1.61$) rated checking a cell phone while at dinner with a significant other as more appropriate than Baby Boomers ($M = 2.25, SD = 1.46$).

Checking a cell phone while at dinner with co-workers. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of checking a cell phone while at dinner with co-workers. There was a significant difference between the generations, $t(335) = 3.40, p < .001$. Millennial participants ($M = 3.11, SD = 1.67$) rated checking a cell phone while at dinner with co-workers as more appropriate than Baby Boomers ($M = 2.50, SD = 1.61$).

Checking a cell phone while in a face-to-face conversation with family. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of checking a cell phone while in a face-to-face conversation with family. There was a significant difference between the generations, $t(335) = 4.92, p < .000$. Millennial participants ($M = 2.70, SD = 1.62$) rated checking a cell phone while in a face-to-face conversation with family as more appropriate than Baby Boomers ($M = 1.92, SD = 1.30$).

Checking a cell phone while in a face-to-face conversation with friends. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of checking a cell phone while in a face-to-face

conversation with friends. There was a significant difference between the generations, $t(335) = 7.09, p < .000$. Millennial participants ($M = 3.02, SD = 1.68$) rated checking a cell phone while in a face-to-face conversation with friends as more appropriate than Baby Boomers ($M = 1.87, SD = 1.29$).

Checking a cell phone while in a face-to-face conversation with significant other. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of checking a cell phone while in a face-to-face conversation with a significant other. There was a significant difference between the generations, $t(335) = 4.36, p < .000$. Millennial participants ($M = 2.62, SD = 1.56$) rated checking a cell phone while in a face-to-face conversation with a significant other as more appropriate than Baby Boomers ($M = 1.92, SD = 1.38$).

Checking a cell phone while in a face-to-face conversation with a co-worker. The independent sample t-test was run to test the difference in how Millennials and Baby Boomers rated the appropriateness of checking a cell phone while in a face-to-face conversation with a co-worker. There was a significant difference between the generations, $t(335) = 3.31, p = .002$. Millennial participants ($M = 2.58, SD = 1.68$) rated checking a cell phone while in a face-to-face conversation with a co-worker as more appropriate than Baby Boomers ($M = 2.05, SD = 1.46$).

Excusing bad etiquette. More interesting results were yielded through testing how willing an individual was to excuse his or herself when accepting a phone call while out to dinner with a friend, family, date, or co-worker. These items were tested for reliability before computing into a single variable. The Cronbach alpha for this measure

is .955. An independent t-test was then run to compare means between Millennials and Baby Boomers and how willing they were to excuse themselves. There was no statistically significant difference between the generations $t(335) = -.91, p = .366$.

Speaking out. More interesting results were yielded through testing how willing an individual was to speak out against someone breaking rules of cell phone etiquette. Participants were asked to indicate how willing they were to speak out against family, friends, a date, a co-worker, and a stranger that was breaking cell phone etiquette. These variables were tested for reliability before computing into a single variable. The Cronbach alpha for this measure is .835. An independent t-test was then run to compare means between Millennials and Baby Boomers and how likely they were to speak out against someone breaking cell phone etiquette. There was no statistically significant difference between the generations $t(335) = -1.63, p = .103$.

Assessing etiquette. More interesting results were yielded through testing how often an individual felt he or she followed the rules of cell phone etiquette. A t-test was run to compare means between Millennials and Baby Boomers as to how often they felt they followed rules of cell phone etiquette. There was a significant difference between the generations $t(335) = -4.44, p < .000$. Baby Boomer participants ($M = 5.67, SD = 1.07$) felt they more often followed rules of cell phone etiquette than did Millennial participants ($M = 5.17, SD = .97$).

A t-test was run to compare means between Millennials and Baby Boomers as to how often they felt others followed the rules of cell phone etiquette. There was no significant difference between the generations $t(335) = 1.69, p = .092$. Millennials ($M =$

3.26, $SD = 1.24$) and Baby Boomers ($M = 3.03$, $SD = 1.18$) indicated others followed rules of etiquette less often than themselves.

Open answer content analyses. Participants were asked to answer two open answer questions concerning etiquette. The first asked participants to mention what rule of cell phone etiquette people most frequently break. The other question asked participants to mention if they had ever spoken out against someone breaking cell phone etiquette and how.

What rule of cell phone etiquette do you feel people break most frequently?

Thirteen variables were coded for after analyzing the responses to this open-ended question. These codes included the following variables: The respondent did not know or had no answer, the respondent mentioned interrupting face to face conversations, the respondent mentioned checking the phone too often, the respondent mentioned talking too loudly, the respondent mentioned not silencing a phone when in a quiet place or inappropriate time, the respondent mentioned using a phone while driving, the respondent mentioned discussing personal information on the phone in a public place, the respondent mentioned using the phone at a meal, the respondent mentioned using a phone during a business meeting, the respondent mentioned someone he or she was trying to reach didn't respond in a timely fashion, the respondent mentioned using cell phones in places that displayed no cell phone usage signs, and the respondent mentioned playing loud music or having a loud ringtone.

Don't know. The first crosstab test run concerned whether there was a difference between the generations in whether they did not have an opinion about cell phone

etiquette. The number of participants that did not have an opinion did not differ by generation $\chi^2 (1, N = 337) = 1.37, p = .241$).

Face to Face. The second crosstab test run concerned whether there was a difference between the generations in whether they mentioned breaking a face-to-face conversation through cell phone use. The sample included 36% of Millennials ($n = 58$) and 23% of Baby Boomers ($n = 41$) that mentioned breaking face-to-face conversations as breaking cell phone etiquette. The number of participants that mentioned breaking face-to-face conversation as breaking cell phone etiquette differed by generation $\chi^2 (1, N = 337) = 6.94, p = .008$). Millennials mentioned breaking face-to-face conversation through cell phone use more often than Baby Boomers as poor cell phone etiquette.

Checking the cell phone. The third crosstab test run concerned whether there was a difference between the generations in whether they mentioned constantly checking a cell phone as breaking cell phone etiquette. The number of participants that mentioned constantly checking a cell phone as breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = .07, p = .398$).

Talking loudly. The fourth crosstab test run concerned whether there was a difference between the generations in whether they mentioned talking loudly on a cell phone as breaking cell phone etiquette. The number of participants that mentioned talking loudly on a cell phone as breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = 1.98, p = .160$).

Not silencing. The fifth crosstab test run concerned whether there was a difference between the generations in whether they mentioned not silencing a cell phone in a quiet

area as breaking cell phone etiquette. The number of participants that mentioned not silencing a cell phone in a quiet area as breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = 1.80, p = .180$.

Driving and using a cell phone. The sixth crosstab test run concerned whether there was a difference between the generations in whether they mentioned driving and using a cell phone as breaking cell phone etiquette. The sample included 4% of Millennials ($n = 7$) and 12% Baby Boomers ($n = 21$) that mentioned driving and using a cell phone as breaking cell phone etiquette. The number of participants that mentioned driving and using a cell phone as breaking cell phone etiquette differed by generation $\chi^2(1, N = 337) = 6.19, p = .013$. Baby Boomers mentioned driving and using a cell phone more often than Millennials as poor cell phone etiquette.

Personal talk. The seventh crosstab test run concerned whether there was a difference between the generations in whether they mentioned discussing personal information on a cell conversation while in public as breaking cell phone etiquette. The number of participants that discussing personal information on a cell phone conversation while in public as breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = .23, p = .631$.

Public talk. The eighth crosstab test run concerned whether there was a difference between the generations in whether they mentioned talking on a cell phone in public as breaking cell phone etiquette. The number of participants that mentioned talking on a cell phone in public as breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = .93, p = .336$.

Interrupting a meal. The ninth crosstab test run concerned whether there was a difference between the generations in whether they mentioned using a cell phone during a meal as breaking cell phone etiquette. The number of participants that mentioned using a cell phone during a meal as breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = 1.67, p = .196$.

Interrupting a business meeting. The tenth crosstab test run concerned whether there was a difference between the generations in whether they mentioned using a cell phone during a business meeting as breaking cell phone etiquette. The number of participants that mentioned using a cell phone during a business meeting as breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = .04, p = .836$.

Not responding. The eleventh crosstab test run concerned whether there was a difference between the generations in whether they mentioned not responding to a call or text in a timely manner as breaking cell phone etiquette. The number of participants that mentioned not responding to a call or text in a timely manner as breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = 1.11, p = .292$.

Ignoring no cell phone signs. The twelfth crosstab test run concerned whether there was a difference between the generations in whether they mentioned ignoring no cell phone signs as breaking cell phone etiquette. The number of participants that mentioned ignoring no cell phone signs as breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = 2.74, p = .098$.

Loud music or ringtone. The thirteenth crosstab test run concerned whether there was a difference between the generations in whether they mentioned playing loud music

or having a loud ringtone as breaking cell phone etiquette. The number of participants that mentioned playing loud music or having a loud ringtone as breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = 1.37, p = .241$.

Have you ever communicated your feelings to someone breaking cell phone etiquette? What did you say and how did you handle it? Eleven variables were coded after analyzing the responses to this open-ended question. These codes included the following variables: The respondent did not know or had no answer, the respondent does not speak out against poor cell phone etiquette, the respondent speaks out against poor cell phone etiquette by joking, the respondent speaks out against poor cell phone etiquette with a direct statement, the respondent sometimes speaks out against poor cell phone etiquette, the respondent speaks out to family about poor cell phone etiquette, the respondent speaks out to strangers about poor cell phone etiquette, the respondent speaks out to a significant other about poor cell phone etiquette, the respondent speaks out to a co-worker about poor cell phone etiquette, and the respondent speaks out to a friend about poor cell phone etiquette.

Don't know. The first crosstab test run concerned whether there was a difference between the generations in whether they did not know about a time they spoke out to someone breaking cell phone estimate or did not answer. The number of participants that did not know about a time they spoke out to someone breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = 3.33, p = .068$.

Do not speak out. The second crosstab test run concerned whether there was a difference between the generations in whether they do not speak out to someone breaking

cell phone etiquette. The number of participants that mentioned they do not speak out to someone breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = .73, p = .787$).

Joke about it. The third crosstab test run concerned whether there was a difference between the generations in whether they joked when speaking out against someone breaking cell phone etiquette. The number of participants that mentioned they joke about it when speaking out against someone breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = 1.07, p = .301$).

Direct statement. The fourth crosstab test run concerned whether there was a difference between the generations in whether they give a direct statement to someone breaking cell phone etiquette. The sample included 30% of Millennials ($n = 48$) and 41% of Baby Boomers ($n = 72$) that mentioned they have given a direct statement to someone breaking cell phone etiquette. The number of participants that mentioned giving a direct statement to someone breaking cell phone etiquette differed by generation $\chi^2 (1, N = 337) = 4.18, p = .041$). Baby Boomers mentioned giving a direct statement to someone breaking cell phone etiquette more often than Millennials.

Sometimes speaks out. The fifth crosstab test run concerned whether there was a difference between the generations in whether they reported sometimes speaking out to someone breaking cell phone etiquette. The number of participants that mentioned they sometimes speak out against someone breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = .84, p = .360$).

Speak out against family. The sixth crosstab test run concerned whether there was a difference between the generations in whether they reported speaking out against their families breaking cell phone etiquette. The number of participants that reported speaking out against their families when breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = 3.23, p = .072$.

Speak out against strangers. The seventh crosstab test run concerned whether there was a difference between the generations in whether they reported speaking out against strangers breaking cell phone etiquette. The number of participants that reported speaking out against strangers breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = .03, p = .853$.

Speak out against significant other. The eighth crosstab test run concerned whether there was a difference between the generations in whether they reported speaking out against significant others breaking cell phone etiquette. The number of participants that reported speaking out against significant others breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = .52, p = .472$.

Speak out against co-workers. The ninth crosstab test run concerned whether there was a difference between the generations in whether they reported speaking out against co-workers breaking cell phone etiquette. The number of participants that reported speaking out against co-workers breaking cell phone etiquette did not differ by generation $\chi^2 (1, N = 337) = 1.86, p = .172$.

Speak out against friends. The tenth crosstab test run concerned whether there was a difference between the generations in whether they reported speaking out against

friends breaking cell phone etiquette. The number of participants that reported speaking out against friends breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = 2.10, p = .148$.

Give a look. The eleventh cross tabtest run concerned whether there was a difference between the generations in whether they reported giving a bad look to someone breaking cell phone etiquette. The number of participants that reported giving a bad look to someone breaking cell phone etiquette did not differ by generation $\chi^2(1, N = 337) = 1.86, p = .172$.

Discussion

Following an analysis of the survey and testing of the hypotheses, there are some notable findings in differences between the Millennial and Baby Boomer generations. There are also some interesting findings concerning cell phone dependency, usage, and etiquette from these generations as one, combined demographic.

Of the three hypotheses tested, H1 and H3 were supported through statistically significant independent t-tests and H2 was partially supported through all but one statistically significant t-test. These tests showed support that Millennials were more dependent, used their cell phones for more purposes, and had less stringent concepts of cell phone etiquette than Baby Boomers. However, from a practical perspective, these findings could be more conclusive if the differences in means between these groups had been larger and the reported standard deviations had been smaller. The differences in cell phone usage were greater than those of dependency and etiquette concepts; however, this variable had one less interval on its measurement scale, which could have played a role in this comparison.

Dependency

This study found that Millennials are more dependent on their cell phones than Baby Boomers; however, it did so by a slim margin. Respondents also indicated their dependency as relatively neutral, but in the more dependent spectrum of the scale. When looking at the dependency scales individually, it is evident that even though the differences between generations is marginal, in some specific cases both generations rated their dependency levels as very high. Stam and Stanton (2004) found that

Millennials own a significant level of stress in the absence of a cell phone and that was confirmed in this study by both the measures of Millennials worry in situations when they either lost or damaged their cell phones.

It is still difficult to tell if these ratings are a realistic and accurate depiction of cell phone dependency. There is a possibility that the Social Desirability Theory may explain why these dependency ratings had a tendency to be neutral (Crowne & Marlowe, 1964). Had certain individuals believed being dependent on a cell phone to be socially unacceptable, they may have contributed to skewing data by selecting an answering indicating less dependence.

The Diffusion of Innovation theory may play a possible role in these findings as well (Rogers, 1995). While Krohn (2004) found that the Baby Boomer generation still has members that may have yet to master the use of the technology, these present 2012 findings may indicate these findings are out of date. As the information age has continued to expand, so too has the ability to communicate quicker and more efficiently with each other. This may provide ground to believe that Baby Boomers have capitalized on the interpersonal communication, which Rogers (1995) discussed as contributing to the adoption of innovation. As Baby Boomers have been able to more quickly and more efficiently communicate with each other, they may have also been able to more quickly adapt to the changes in cell phone technology.

While this notion may confirm Diffusion of Innovation Theory, it conflicts with the research of Lancaster and Stillman (2002) and generational theory of Baby Boomers suggesting this generation has a difficult time adapting to rapidly changing technology.

Though not measured in this study, this could be a result of Baby Boomers finding satisfaction in their cell phone usage, and consequently gravitating toward this source of satisfaction (Mehiabian, 1971). It is important to note; however, that dependency cannot necessarily indicate Baby Boomers have adapted fully to cell phone technology. This may merely suggest that Baby Boomers have begun to adapt and develop a dependency for this technology.

Checking the cell phone. While the computed variable for Dependency did not yield a larger difference in means between the two generations' dependencies, individual t-tests yielded some interesting results. The greatest difference in means between the dependency variables existed in how often an individual checked his or her cell phone. Millennials rated themselves on average nearly a whole interval higher in regard to how often they checked their cell phones. This finding may confirm the findings of Loonis, Apter, and Sztulman (2000) in that through habitual exposure to an instrument or process, a person may find that instrument to be a primary source of pleasure and become increasingly focused on that instrument. This would of course require additional testing to discover how long these participants have been exposed to cellular devices. These findings may still suggest that Millennials are more fixated on the cell phone as a medium in itself than the Baby Boomers. This concept should be expanded upon further before drawing a definitive conclusion.

Common ground. Through the individual t-tests it was discovered that both generations rated themselves above neutral in regard to how dependent they were on their cell phones. However, when asked to rate how dependent they were on their cell phone

compared to other people their age, both generations ranked themselves as less dependent than their peers. While Social Desirability Theory may play a role here as well, this finding is worth further studying. It is interesting that both generations felt their peers were more dependent on their cell phones, yet still rated their own dependencies relatively high.

Usage

This study found that Millennials use their cell phones for more purposes and more often than Baby Boomers. Though there was one less interval on these scales compared to the dependency scales, the difference in means between generations was double that of dependency in several cases. This supports research findings that claim Millennials as known for utilizing the cell phone more than other generations (Kroski, 2008). This is interesting that Millennials use more aspects of the cell phone than Baby Boomers but did not report being all that much more dependent than Baby Boomers. Though the margin in dependency was small, this still supports a link between dependency and cell phone function, particularly innovative and enhanced functions (Pearce, 2009; Shin, 2009). When taking a look at the individual cell phone functions, it is clear that the Millennial generation uses enhanced functions more than the Baby Boomer generation and places more importance on these functions as well.

After running individual t-tests, several specific cell phone functions Millennials utilized more than Baby Boomers were discovered. Most notable were listening to songs, viewing photos, and the amount of apps on a phone. Perhaps the most interesting finding regarding cell phone usage was the importance each generation placed on specific

functions of the cell phone. The Millennial generation placed more importance on cell phone functions than did Baby Boomers. The most outstanding differences in importance ratings were on the importance of social media, music, Internet, and GPS on a cell phone. Seeing as how these elements are not traditional components of a phone, it may seem plausible that the Millennial generation has already adapted to and gained an appreciation of these. This is supported by past research indicating the Millennial generation's desire to feel included and engage in an extended social circle (Ling, 2004; Peters & ben Allouch, 2005; Walsh & White, 2006). Lee (2006) concluded this Millennial desire for social inclusion supported their many motives for cell phone use compared to other generations.

When one relates the usage findings here with the dependency findings, an interesting discussion arises. While Baby Boomers still indicated an average dependency rating above neutral, the Baby Boomer usage ratings of the latest cell phone innovations such as GPS, Internet, and social media were below neutral. These findings are interesting in relation to the reasons people are known to gravitate towards a source. As McQuail (1987) discussed, people may seek a medium to satisfy needs for entertainment, information, personal identity, or for relationships. From this study's findings, it appears Baby Boomers use the cell phone more to satisfy the relationship factor while Millennials' wider range of uses may satisfy all four of these categories.

This may also indicate that Baby Boomers feel dependent on different functions of the cell phone or feel dependent for different reasons. While the Diffusion of Innovation theory may have helped explain earlier how Baby Boomers have grown

relatively dependent on cell phones compared to Millennials, it could be that Baby Boomers have only grown dependent on basic functions of the cell phone. In fact, Baby Boomers rated calling and texting higher than any other cell phone feature. Lancaster and Stillman (2002) discussed Baby Boomer's difficulty with adapting to constantly evolving technology, and this may be a perfect example of this. While Baby Boomers may be catching up with basic cell phone functions, there are still many more for them to master such as the use of Internet, apps, social media, and navigation.

Open ended responses. Speaking of basic function, when given a chance for Baby Boomers to speak to important functions of the cell phone, they more frequently than Millennials mentioned its use for emergencies. Aside from simple communication, cell phone use for emergencies was the most mentioned important function of a cell phone by Baby Boomers. On the other hand, Millennials could not seem to agree on any aspect as much as the Baby Boomers could. This may indicate that the Millennial generation values a very wide range of important cell phone functions, while Baby Boomers think much more like one another on the issue.

These findings in relation to cell phone usage indicate that while Baby Boomers may be catching onto the cell phone, but there are many more aspects of cell phone function they have yet to adapt. The standard deviations reported in the results section indicate a large variance among Baby Boomers in both their usage of particular cell phone functions and the importance those functions are to them. However, when Baby Boomers were given the opportunity to speak for themselves, it was clear they were very

like-minded in that the cell phone to this generation serves primarily as a communication device and is especially important for emergency situations.

Etiquette

This study found that Millennials have less stringent concepts of etiquette than Baby Boomers; however, it did so by a slim margin. Twenge and Campbell (2008) found that Millennials are less likely to follow rules than other generations. This concept parallels the fact that Millennials are less likely to recognize poor cell phone etiquette. Whether it is a conscious effort not to follow etiquette or just a norm ingrained in the generation, this particular finding is supported by Twenge and Campbell (2008). Smith and Clurman (1997) also discussed generational theory that appears applicable here. Smith and Clurman (1997) discussed Baby Boomers as being more concerned with immediate surroundings, especially compared to Millennials. This may help explain why Baby Boomers demonstrated they hold more a more stringent concept of cell phone etiquette. By staying focused on immediate surroundings instead of focusing on a cell phone, Baby Boomers may have a head start in avoiding cell phones during inappropriate situations.

Common ground. Perhaps most important of all in these findings is that the mean scores average below neutral on the scale of acceptability. In other words, both Millennials and Baby Boomers agreed that it was inappropriate to take a call or check a cell phone while in various social contexts. The difference in how Millennials and Baby Boomers rated the appropriateness of breaking cell phone etiquette in those specific situations did vary based on the context of the situation. This finding confirms Burgoon's

(1978) Expectancy Violations Theory in respect to the breakdown of the expectancy concept. This includes context, relationship, and communicator characteristics (Burgoon, 1978; Dainton & Zelle, 2010). The communicator characteristic in this study was the generation and the relationship varied among family, friends, significant others, co-workers, and strangers. The context varied between dinner situations and face-to-face situations in general. In every context and one particular relationship, Millennials had less stringent concepts of cell phone etiquette than Baby Boomers. That relationship was friendship. In every case when asked to rate the appropriateness of taking a call or checking a phone while with a friend, Millennials rated the situation as more appropriate than Baby Boomers. It is important to note here that Millennials still indicated these instances as inappropriate, but there was still a significant difference in mean value between the two generations.

Acting on etiquette. Two more variables were computed to test how likely members of each generation were to speak out against someone breaking cell phone etiquette and how likely they were to excuse themselves when breaking cell phone etiquette. In both instances there were no differences between the groups in their likeliness to speak out against poor etiquette or to excuse themselves. Two important factors can still be drawn from these findings though. Both generations barely averaged indicating above neutral that they would excuse themselves when breaking cell phone etiquette. The standard deviations for this variable were large for both generations, which indicate both generations may have members that are both unlikely and very likely to excuse themselves. This confirms some popular media articles that people know what

constitutes poor cell phone etiquette, but they're doing it anyway (Bosker, 2010; Elgan, 2010). These findings uncover more. The average person is barely likely to excuse his or herself when breaking cell phone etiquette. This may be because they assume people are unlikely to speak out to them for breaking cell phone etiquette, which these results have confirmed people are unlikely to do.

Assessing self and others. When comparing which generation assesses itself as following cell phone etiquette more regularly, Baby Boomers had a slight statistically significant edge. While the difference in means between these two groups was statistically significant, it was still marginal. The important finding here is that both generations rated themselves as often following cell phone etiquette. While Social Desirability Theory may be in play here again, it is interesting to note that both generations considered people other than themselves to follow cell phone etiquette considerably less than themselves. Though there was no a difference between generations judging others habits of cell phone etiquette, their similar means may indicate agreement in that people in general may believe others to have poor cell phone etiquette. Drawing from generational research, Baby Boomers self-assessment may coincide with their preference and value of face-to-face conversations (Dainton & Zelle, 2010).

Open ended questions. When respondents had the opportunity to share their thoughts on etiquette, results varied dramatically. Because respondents were asked to share what was most important in their minds in regard to the most commonly broken cell phone rule and how they react to cell phone etiquette when it's broken, a wide range of responses were provided. This may provide support for the Expectancy Violations

Theory in that context matters (Burgoon, 1978; Dainton & Zelle, 2010). The wide range of situations and relationships mentioned in this open response supports the fact that violation valence may shift between individuals. In other words, some people may find some contexts of cell phone use less appropriate than others. While Chi-square tests produced few statistically significant results, it's perhaps best to look at the generations' numbers together. Nearly one in every three respondents mentioned breaking a face-to-face conversation as poor etiquette. Yet when looking back on previous results, as a whole, both generations are unlikely to say anything to someone when this occurs. Similarly, when asked how a respondent would react to someone breaking cell phone etiquette, nearly one in every three respondents said they would say nothing. Some respondents included reasons for this such as not knowing how someone would react to the confrontation, or it being none of their business. How a person reacts to someone breaking a cell phone etiquette may be a result of how they view the negative or positive reactions of the person involved, which would be supported by EVT once again (Burgoon, 1978).

Theoretical Implications

This study had support for differences between the Millennials and Baby Boomer generations and these differences carry theoretical implications for generational communication theory. While some differences were greater than others concerning dependency, usage, and etiquette, it was interesting to examine several similar attitudes and behaviors in the results. For example, while there were differences between the generations concerning dependency and etiquette, these were not all that large of

differences. Perhaps a constant and readily available communication device is drawing these two generations together, more than it is maintaining their differences. It will be interesting to see if a blending of generational characteristics, attitudes, and behaviors might occur around a modern and rapidly evolving communication device. Smola and Sutton (2002) had discussed how generational values may change as an individual ages. Some of the marginally small differences in Millennials and Baby Boomers could suggest that perhaps other factors could affect values, such as a communication device as focal and powerful as the cell phone. This concept could become especially significant if Baby Boomers experience a quicker adaption to and increased usage of enhanced cell phone functions over the following years. A narrowing of differences around cell phone dependency, usage, and concepts of etiquette between the generations could call for careful examination of how these generations are responding to the rapidly evolving technological age.

From a sociological perspective, it will be important to observe how these generations, and society in general behave in the way of cell phone etiquette. This study has indicated both generations understand what bad cell phone etiquette is. This study has also indicated that both generations are unlikely to speak out against someone violating the rules cell phone etiquette. While the area of cell phone etiquette is more of a popular media topic than a scientific concern, this study produced results that call for further observation on this matter. Especially in regards to how people behave with their cell phones in different contexts, this study contributes to Burgoon's (1978) concepts of context and what people expect in certain social situations regarding cell phone usage.

This study may provide an initial understanding that cell phone etiquette is a legitimate concept and worth applying further social study towards. Observing and understanding the shifting trends in communication styles around the cell phone can be a perennially relevant area of study in the communication sciences.

Practical Implications

The results from the dependency measures show that people are willing to admit they are dependent on these devices, but the extent to which their responses are entirely honest is questionable. While social dependency may not be as important as relying on a cell phone for business or emergency purposes, these findings suggest that people do rely on their phones at least to some extent. But to what extent would people truly be able to live without their cell phones? The implications of these dependency findings are important to consider in regard to how people might truly react to disabled cell phone service and the effects it could have on business, or emergency services.

These usage findings have some important implications. These implications could be especially useful for marketers. About 85% of American adults owned cell phones in 2011 (Zickhur, 2011). Understanding how different demographics use their cell phones or how they want to use them could be very useful information for marketing these devices. Especially if cellular companies are looking to sign up more people for their data plans, introducing markets that are unfamiliar with features like internet and GPS could be very helpful. While this study suggests Baby Boomers may be lagging in the adoption of features like Internet and GPS, they are a large market that still has an opportunity to adopt these features as part of their cell phone usage.

While Lancaster and Stillman (2002) some years ago concluded Baby Boomers do not adapt to and accept technology as quickly as other generations, it will be useful in the sense of generational theory to watch as cell phones continue to become ingrained in our culture. How Baby Boomers choose to adapt to this device as it constantly evolves could have real world implications in how we choose to communicate with others, especially those in other generations.

Etiquette appears to be a very vast and open area of interpretation to these two groups. While both generations were able to identify the provided social contexts as lacking good etiquette, it seems people are still unwilling to take action against poor cell phone etiquette. This may have implications beyond that of what is polite or rude, but also how we communicate with each other as our technology continues to advance.

This concept may be of particular concern in the work environment. As Baby Boomers and Millennials continue to interact in the work environment, clashes in cell phone etiquette may be prone to occur. Taking into special consideration that Millennials are more than likely answering to management positions filled by Baby Boomers, Baby Boomers have an opportunity to instill their values at least in the work place. Similarly, while shop owners and business owners alike may be able to enforce cell phone etiquette in their businesses, this could carry with it consequences detrimental to the business. Understanding that although these two generations appreciate and understand cell phone etiquette, they may react negatively as a result of their dependency on the device. This “cell phone withdrawal” as one might be able to call it could adversely affect business owners and work relationships if cell phone etiquette is not implemented with caution.

If people are unwilling to respect the unspoken rules of face-to-face communication and etiquette, our communication techniques may be vulnerable to favoring communication devices as opposed to real time, face-to-face interactions. The information age is so immediate and demanding, many people may simply be trying to keep up with what's going on everywhere else and lose focus on what is right in front of them.

Limitations

Like most studies, this study had its limitations. The first notable limitation was the type of sampling used. This study used convenient and snowball sampling, which may have not produced an accurate sample of respondents. If possible, a probability sampling procedure would be more effective in creating a more representative sample and consequently more representative responses. Because both samples consisted of more than 90% Caucasians, the lack of a diverse ethnic sample may have served as a confounding variable.

This study attempted to cover a wide range of aspects concerning cell phones including dependency, usage, and etiquette. In order to gather enough information to produce valid information for each topic, an extensive number of survey items or questions were necessary. However due to the extensive nature of this study, the original survey included an extensive number of survey items that had to be cut down as not to overwhelm any respondents taking the survey. There were still a considerable amount of questions for respondents to answer and this may have had an effect on whether some respondents chose to complete the survey or whether their responses were entirely

accurate.

The survey questions only allowed participants to indicate a specific number regarding how they felt about a specific question. While this survey also provided open-ended questions, a more in depth qualitative approach may have been more useful regarding the topic of etiquette. Since this is a relatively new area of study, there may be more qualitative information that must be uncovered before creating the best variables from quantitative measures.

Future Research

Future studies should take a more focused approach to a specific cell phone communication issue. While dependence and usage go hand-in-hand, etiquette could very well be focused on by itself. This will allow a more extensive study for each of these elements of cell phone communication. In the case these elements are split, there are additional measures that could be taken to make the research better. Dependence and usage may involve elements of satisfaction in regard to how satisfied an individual is with specific functions of his or her cell phone and then how dependent he or she is as a result. The link between satisfaction and dependency went unexamined in this study and should be a focus in future studies.

Should etiquette be pursued further, it may be in the best interest of the researcher to start with qualitative measures to create more relevant contexts and relationships as part of the quantitative measuring process. As cell phone etiquette is still a relatively unexamined area, it would be helpful to gather qualitative literature before examining major social etiquette concerns in regard to cell phone use.

Conclusion

While differences between the generations varied in regard to cell phone dependency, usage, and etiquette, these aspects of cell phone communication may very well all be tied together. As the Millennials held higher rates of dependency and used their phones more frequently than Baby Boomers, the Millennials also had less stringent concepts of cell phone etiquette. These less stringent concepts of etiquette existed particularly with Millennials' friends. Millennials use this communication device more. They depend on it more. They find this device more appropriate to use with their friends than with anyone else. Connecting these dots provides unique insight into this rapidly evolving generation and how they interact with each other and with their cell phones.

The cell phone has become a crutch for those who have grown up with it. It has also won the attention of an older generation that was doing just fine without it. The cell phone may no longer be just a tool or a medium, but a necessary part of one's daily functioning. Whether it serves as a morning alarm, a substitute for the morning newspaper, or way to record TV shows from anywhere outside of the home, it's difficult to find something this device cannot do.

Baby Boomers may not need to incorporate this device into life in the same way Millennials do. Staying connected and expanding one's social reach is a concept the Millennials were raised with and the cell phone serves this mindset.

Appendices

Appendix A

Survey

Welcome to my survey! Thank you for clicking and participating. Before you get started, I would like to invite you to ask some questions about demographic/background information. The responses you provide will greatly help my research.

THE INFORMATION YOU PROVIDE HERE WILL NOT BE MATCHED TO YOUR NAME OR IDENTITY IN ANY WAY. The information you provide will be kept strictly confidential. The information you provide will be combined with other participants' information into a combined demographic profile.

Please note, this study seeks to investigate a comparison between the Millennial and Baby Boomer generations. If you do not belong to one of these generations, you may discontinue the survey at this time.

Please confirm you belong to one of these generations before continuing this survey.

- 1) I am a Millennial (18-34)
- 2) I am a Baby Boomer (46-68)

Dependency - Please carefully read the following questions and respond by selecting the number that most appropriately describes your feelings.

Dependency

How worried would you be if...

- 1) If you lost your cell phone?**

1	2	3	4	5	6	7
Not worried at all			Neutral	Very Worried		
- 2) If your cell phone battery dies mid day?**

1	2	3	4	5	6	7
Not worried at all			Neutral	Very Worried		
- 3) If you were in a location with no cell phone reception?**

1	2	3	4	5	6	7
Not worried at all			Neutral	Very Worried		

4) If you damaged your cell phone completely?

1	2	3	4	5	6	7
Not worried at all			Neutral		Very Worried	

5) How dependent would you say you are on your cell phone?

1	2	3	4	5	6	7
Not worried at all			Neutral		Very Worried	

6) How dependent are you on your cell phone compared to others in your generation?

1	2	3	4	5	6	7
Least Dependent			Neutral		Most Dependent	

7) How often do you feel you check your cell phone?

1	2	3	4	5	6	7
Very Infrequently			Neutral		Very Frequently	

8) How difficult do you feel it would be to live your current lifestyle without a cell phone?

1	2	3	4	5	6	7
Not difficult at all			Neutral		Very Difficult	

9) Rate the verity of the following statement: My cell phone serves a critical role in my day-to-day.

1	2	3	4	5	6	7
Not true at all			Neutral		Very True	

Cell Phone Usage - Please carefully read the following questions and respond by selecting the answer that most accurately reflects your cell phone usage.

Cell Phone Usage

1) On average, how many videos do you watch on your cell phone each day?

1	2	3	4	5	6
(None)	(1-2)	(3-4)	(5-6)	(7-9)	(10+)

2) On average, how many articles do you read on your cell phone each day?

1	2	3	4	5	6
(None)	(1-2)	(3-4)	(5-6)	(7-9)	(10+)

3) On average, how many photos do you take on your cell phone each day?

1	2	3	4	5	6
(None)	(1-2)	(3-4)	(5-6)	(7-9)	(10+)

4) On average, how many photos do you view on your cell phone each day?

1	2	3	4	5	6
(None)	(1-2)	(3-4)	(5-6)	(7-9)	(10+)

5) On average, how many songs do you listen to on your cell phone each day?

1	2	3	4	5	6
(None)	(1-5)	(6-10)	(11-15)	(16-20)	(21+)

6) How many games do you have on your cell phone?

1	2	3	4	5	6
(None)	(1-2)	(3-4)	(5-6)	(7-8)	(9+)

7) On average, how many emails do you read on your cell phone each day?

1	2	3	4	5	6
(None)	(1-3)	(4-6)	(7-9)	(10-12)	(13+)

8) On average, how many emails do you send on your cell phone each day?

1	2	3	4	5	6
(None)	(1-3)	(4-6)	(7-9)	(10-12)	(13+)

9) On average, how many times do you check Facebook on your cell phone each day?

1	2	3	4	5	6
(None)	(1-3)	(4-6)	(7-9)	(10-12)	(13+)

10) On average, how many times do you check Twitter on your cell phone each day?

1	2	3	4	5	6
(None)	(1-3)	(4-6)	(7-9)	(10-12)	(13+)

11) On average, how many texts do you send on your cell phone each day?

1	2	3	4	5	6
(None)	(1-10)	(11-20)	(21-30)	(31-40)	(41+)

12) On average, how many texts do you read on your cell phone each day?

1	2	3	4	5	6
(None)	(1-10)	(11-20)	(21-30)	(31-40)	(41+)

13) Which do you use most for navigation purposes?

1	2	3	4	5	6
(Cell Phone)	(GPS)	(Map)	(Printed Directions)	(Other)	(9+)

14) How many Apps do you have on your cell phone?

1	2	3	4	5	6
(None)	(1-5)	(6-10)	(11-15)	(16-20)	(21+)

Rate the importance of the following cell phone functions to your cell phone usage. (1 being Not Very Important and 7 being Very Important)

Cell Phone Usage Importance**1) How important is gaming to your cell phone usage?**

1	2	3	4	5	6	7
Not very important			Neutral		Very important	

2) How important is voice calling to your cell phone usage?

1	2	3	4	5	6	7
Not very important			Neutral		Very important	

3) How important is texting to your cell phone usage?

1	2	3	4	5	6	7
Not very important			Neutral		Very important	

4) How important is social media to your cell phone usage?

1	2	3	4	5	6	7
Not very important			Neutral		Very important	

5) How important is email to your cell phone usage?

1	2	3	4	5	6	7
Not very important			Neutral		Very important	

6) How important is GPS to your cell phone usage?

1	2	3	4	5	6	7
Not very important			Neutral		Very important	

7) How important is listening to music to your cell phone usage?

1	2	3	4	5	6	7
Not very important			Neutral		Very important	

8) How important is a camera to your cell phone usage?

1	2	3	4	5	6	7
Not very important			Neutral		Very important	

9) How important is Internet to your cell phone usage?

1	2	3	4	5	6	7
Not very important			Neutral	Very important		

Cell Phone Etiquette - Rate the appropriateness of cell phone use in each situation. Imagine you are in the following situations with the following people. How appropriate do you imagine the following situations would be?

How appropriate is answering your cell phone while out to dinner with...

1) Family

1	2	3	4	5	6	7
Very Inappropriate			Neutral	Very Appropriate		

2) Friends

1	2	3	4	5	6	7
Very Inappropriate			Neutral	Very Appropriate		

3) Spouse/Date

1	2	3	4	5	6	7
Very Inappropriate			Neutral	Very Appropriate		

4) Co-worker

1	2	3	4	5	6	7
Very Inappropriate			Neutral	Very Appropriate		

How appropriate is answering your cell phone while having a face-to-face conversation with...

5) Family

1	2	3	4	5	6	7
Very Inappropriate			Neutral	Very Appropriate		

6) Friends

1	2	3	4	5	6	7
Very Inappropriate			Neutral	Very Appropriate		

7) Spouse/Date

1	2	3	4	5	6	7
Very Inappropriate			Neutral	Very Appropriate		

5) What is your marital/partnered status?

a) Married b) Divorced c) Separated d) Widowed e) Never been married

6) What is your salary range?

a) Under \$20k b) \$20,001 - \$30k c) \$30,001 - \$40k d) \$40,001 - \$50k

e) \$50,001 - \$60k f) \$60,001 - \$70k g) \$70,001 - \$80k h) \$80,001 - \$90k

j) \$90,001 - \$100k k) \$100k plus

Appendix B

IRB Approval

**EXEMPTION NUMBER: 13-0X10**

To: Robert Bauer
From: Institutional Review Board for the Protection of Human
Subjects, Debi Gartland, Chair *DG/WAG*
Date: Tuesday, August 28, 2012
RE: Application for Approval of Research Involving the Use of
Human Participants

Office of University
Research Services

Towson University
8000 York Road
Towson, MD 21252-0001
t. 410 704-2236
f. 410 704-4494

Thank you for submitting an application for approval of the research titled,
Cell Phone Uses and Etiquette across Generations

to the Institutional Review Board for the Protection of Human Participants
(IRB) at Towson University.

Your research is exempt from general Human Participants requirements
according to 45 CFR 46.101(b)(2). No further review of this project is
required from year to year provided it does not deviate from the submitted
research design.

If you substantially change your research project or your survey
instrument, please notify the Board immediately.

We wish you every success in your research project.

CC: H. Jiang
File

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