CELL PHONE USE AND PARENTS' SATISFACTION

WITH TIME SPENT WITH FAMILY

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ABSTRACT

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This study focuses on parents' cell phone usage and family quality. I use cross-sectional data from the Networked Families Survey (N=417), a subcomponent from a larger study, the Pew Internet & American Life Project. I examine whether frequency of parents' cell phone usage (i.e., phoning and texting) to children and spouses affects their degree of satisfaction with time spent with the family, which is an important indicator of quality of family life. The integration of technology into personal and professional communication has become an important topic of scholarship in academia. Technology is changing social interactions. Currently 78% of Americans without children under the age of 18 own a cell phone, and that percentage increases to 91% when children under the age of 18 are present in the home. As cell phone use becomes integrated into Americans' daily lives, it is important to understand its effects on family relationships and satisfaction with family life. I find that cell phone use has no significant relationship to satisfaction with time spent with family. Having dinner with the family and satisfaction with time spent with family was significantly associated, which follows the previous literature. Previous research does suggest that being distracted during this time of connection can detract from any positive effects of eating dinner together, and this might explain the lack of significant effect of technology on family life. Future research should evaluate when cell phones are used to stay in contact and when cell phones are used when with the family to distract.

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INTRODUCTION

A major change in contemporary societies involves individuals' use of information and communication technology. Information and communication technology generally refers to technological platforms such as the Internet, and the physical devices such as cell phones and laptops used to communicate and to process information (Chelsey & Johnson, 2010). In this study, I focus on parents' cell phone usage and satisfaction with time spent with family.

A recent Pew survey entitled "Cell Phones and American Adults" (Lenhart, 2010) reported that about 78% of Americans without children under the age of 18 own a cell phone, and that percentage increases to 91% when children under the age of 18 are present in the home. In recent years, with the ease and affordability of 'family plans,' it is common for nearly all family members over the age of 12 to have a cell phone. Approximately 75% of American teens aged 12-17 own a cell phone, and 88% of those teens also use text messaging to stay in contact with family and friends (Lenhart, 2010). Moreover, there has been a recent decline in the age of first cell phone ownership. Currently 46% of American youths with cell phones received their first cell phone between the ages of 12 and 13; but statistics show that none of the 17 year olds, at the time of the survey, received a cell phone before the age of 10. However, 28% of current 12 year olds received their first cell phone before age 10 (Lenhart, 2010). Thus, in the past decade, a greater percentage of young people are using cell phones, and cell phone ownership is increasingly common at younger ages.

One indicator of the ubiquity of cell phone usage is that one in four American families no longer have 'hard-line' phones, and rely exclusively on cell phones;

moreover, one in six families have hard-line phones, but almost exclusively rely on their cell phones (Blumberg, 2010). Schools, too, are seemingly aware that cell phones, and not 'hard-lines' appear to be the best way to contact students and their parents; schools are using text messaging as a convenient way to convey unforeseen or unplanned changes in school schedules, such as weather delays and cancelations of afterschool programs. In 2006, 74% of Americans reported that they had used their cell phone in an emergency and gained valuable help (Rainie, 2006). In summary, American families seem to be technologically connected via cell phones nearly all of the time, and this phenomenon is likely to continue to increase. As cell phone use becomes integrated into Americans' daily lives, it is important to understand its effects on family relationships and satisfaction with family life.

The integration of cell phone usage into Americans' personal and work communication has become an important topic of academic scholarship (e.g., Blair & Fletcher, 2011; Engel & Green, 2011; Hwang, 2011; LaRue et al., 2010; Sergio, 2008; Turkle, 2004; Aoki & Downes, 2003; Jain, 2002; Kirk, 2002; Turkle, 1982), a topic of interest in popular culture outlets, such as *The New York Times* (e.g., Grobart, 2011; Williams, 2011; Lohrer, 2011; Preston, 2011; Darlin, 2010; Bilton, 2010; Parker-Pope, 2010; Connelly, 2010; Ritchtel, 2010; Stone, 2009; Rosenbloom, 2009; Brooks, 2009; Heffernan, 2009; Holson, 2008), as well as a topic of importance in the communication industry itself. According to the CTIA 2010 Wireless Annual Survey, in the U.S. there were 302,859,674 cell phones in use last year. Cell phone usage is changing how individuals interact, and is likely changing individuals' home environments. As the primary agent of socialization for children and adolescents (Longmore et al. 2011), as

well as an important arena of comfort for both children and adult family members (Mortimer & Call, 2001), it is critical to better understand how technology diffusion, such as cell phone usage affects the family. Compared with studies on the effect of communication technology on work-family dynamics, there is relatively less empirical research that has examined whether and how cell phone usage might influence the quality of family life and changing patterns of face-to-face interaction in the family (exceptions include Chesley, 2004; Chesley & Johnson, and Rosenblatt & Li, 2010). Previous research on the topic of cell phone usage and family life has focused on the breakdown of work-family boundaries (e.g., Bittman, Brown & Wajcman, 2009; Chesley, 2005; Ropke, 2001; Frisson, 2000; Hill, Hawkins, & Miller 1995). These earlier studies are important for demonstrating that cell phone usage can lead to a blurring of work and family time. However, these studies have tended to present a less complete picture of the changes that are occurring within families. I argue that it is likely that cell phone usage is changing how parents maintain authority (e.g., calling or sending a text rather than face-to-face interaction) over their children's activities while at the same time encouraging an open exchange of information within the family. Similarly, cell phone usage is likely changing not only how spouses are communicating, but also how frequently spouses communicate and how families maintain long-distance relationships.

This study focuses on parents' cell phone usage and family quality. I use cross-sectional data from the Networked Families Survey (N=417), a subcomponent from a larger study, the Pew Internet & American Life Project. I examine whether frequency of parents' cell phone usage (i.e., phoning and texting) to children and spouses affects their degree of satisfaction with time spent with the family, which is an important indicator of

quality of family life (Daly, 2001). Additionally, I examine the influence of factors that reflect individuals' location in the social structure (House, 1977), and which likely affect both cell phone usage and satisfaction with time spent with family. These variables are occupation, age, and gender. I review literature on the occupational, generational, and gender digital/technological divides, and when available I specifically discuss the relationship between these social structural variables and cell phone usage. I also review known correlates of family quality, and especially satisfaction with time spent with family. In brief, this study contributes to the literatures on technology diffusion as well as family quality by examining ways in which satisfaction with time spent with family differs by variation in cell phone use. This topic is important to understand because cell phones are a technological medium through which individuals are increasingly communicating; as such, cell phone usage can serve to keep families in contact leading to a sense of greater satisfaction with family time. Conversely, cell phone usage can act as a substitute for objective time with family and can serve to interrupt family time, and lead to dissatisfaction with family time. This study can aid us in understanding whether cell phone usage is a positive or negative influence on how satisfied parents are with the time they spend together with their families.

BACKGROUND

An Early Sociological Perspective on Technology and Society

In 1938 William Ogburn presented a piece entitled "Technology and Sociology" before the third annual meeting of The Southern Sociological Society in Tennessee in which he described the importance of studying technology from a sociological point of view. At the time Ogburn was concerned with how the industrial revolution and other technological advancements were changing the nature of society; but his focus is no less applicable to contemporary American society, yet the technology currently influencing the nature of society is digital technology. Ogburn found the intersection between sociology and technology compelling because in his words "changes in technology are particularly significant in explaining changes in social institutions" (1). Building on these ideas, as well as key premises from the social psychological perspective known as Social Structure and Personality (House 1977; 1987), I argue that the adaption of technology that changes how individuals communicate will likely influence the institution of the family, and family life satisfaction.

Relative to studies of other kinds of social change (e.g., change in economic sectors (Boehnke & Bergs-Winkels, 2002; Jones & Hatcher, 1994), family structures (Teachman, Tedrow, & Crowder 2000; Glick, 1989; Hagestad, 1988), educational institutions (Parsons & Fidler, 2005; Wilkinson, 1994), and religious institutions (Booth et. al. 1995; Chaves, 1994)) change in information and communication technology on family life is less well understood and studied by sociologists. (For example, although there are specialty journals dealing with many sociological topics including family, gender, aging, and occupations, to date there is not a primary sociology journal devoted

to the influence of technology on society). Nevertheless, as new communication technologies trickle into Americans' daily lives, such technologies are changing how individuals interact. For example, a recent survey in *Women's Day*, a popular women's magazine, found that many of their primarily female readers reported that they would call the other partner in the middle of the day to plan dinner or send a text to their partner just to say, "Hi, I'm thinking about you." Similarly, parents reported using cell phone calls and text messages as a way to monitor children, including giving permission for after school activities. Although surveys in popular culture outlets are not necessarily scientific, yet they do speak to the ways in which cell phones are influencing family life. Technology and in particular cell phones are encouraging a constant level of awareness and verbal and written interaction with family members that would have been unthinkable in Ogburn's time. The question examined in this thesis, however, is whether these small connections are interrupting the larger more significant family bonding or encouraging it. The sociological perspective that I draw on, social structure and personality (House, 1977, 1987), provides a useful lens for understanding how the individual's location in the social structure (i.e., society) affects his or opportunities or access to technology, as well as family life experiences.

Social Structure and the Individual

House (1977) categorized the field of social psychology into three primary domains: psychological social psychology, symbolic interactionism, and psychological sociology (social structure and personality). Of relevance here is social structure and personality. This is the most sociological of the three "faces" of social psychology. House described the social structure and personality perspective as, "a large body of

theory and research on the relation of macrosocial structures and processes to individual psychological attributes and behavior" (p. 168). According to Schooler (1994), social structure refers to "[t]he patterned relationships among a set of individual and organizational statuses, as defined by the nature of their interacting roles" (p. 264). Thus, social structure encompasses roles, statuses, social organizations, and culture (Schooler, 1994). The individual's place in the social structure affects opportunities, which affect his or her lifestyle. House (1977) further argued that a "[microsocial focus in social psychology] is necessary… to understand the social and psychological conditions which may intensify *or* mitigate (even nullify) such influence and which may also serve as mechanisms through which individual personality and behavior react back on the social structure" (p.172).

Social support plays an important role in how individuals perceive social structure. House (1987) argued for a further focus on three major aspects of social support: social integration, social networks, and what social support means in those contexts. In this vein, I argue that cell phone usage (both calls and texting) can be conceptualized as a potential source of social support in that its use may enhance social integration with significant others, and expand social networks as well as keeping the individual connected to his or her social network. Thus, cell phone use can be conceived as a relatively understudied source of social support. However, it cannot be assumed that greater frequency of cell phone usage is necessarily indicative of social support, unless we know the meaning of cell phone usage to respondents and their recipients (footnote: unfortunately the meaning or tone of various cell phone uses (providing support versus nagging, for example) is beyond the scope of this thesis because only frequency and not

meaning of cell phone usage is available in this dataset. Additionally, this thesis controls for significant structural variables that may affect technological adoption and satisfaction with family relationships. By bringing together social processes (widespread technology adoption in the guise of cell phones) with macrosocial structural factors (age, gender, occupation classification) and microsocial factors (satisfaction with time spent with spent with family, satisfaction with life), this thesis takes a social psychological approach to the analysis.

In brief, technology use is affected by larger social structures in society. According to Kohn (1989), "positions in larger social structures greatly affect more proximate conditions of life" (p. 31). How families perceive and adopt technology is affected by their place within society: at its very core, new technology is likely expensive and involves a learning curve that may be overwhelming to various populations. For other populations, learning new communication technology may be a routine part of their job. Conversely, lack of experience with new technology may limit job prospects. Likely markers of individuals' locations in the social structure include: gender, occupation, and, age. There has been an ongoing debate about how gender affects technology adoption in general. However, it is likely that cell phone usage, especially with regard to maintaining contact with children and spouses may be distinct from other examples of technology. Age likely plays a role regarding how technology fits into the life of the individual: younger populations tend to be the first to become adept at new technology, and thus have the advantage as society becomes more technologically focused. Occupational status may also play a role in the use of technology. All of these relationships will be explored more in depth in the sections that follow.

According to McLeod and Lively (2003), social structure and personality research views the social world in terms of concentric circles, with the individual at the core and the social system at the edge (p. 78). This structure organizes the informational flow coherently, and is useful for understanding the interplay between how the individual uses technology, how the close social ties of the individual affect technology use, and how the social system presses back on all of this. For example, an upper middle class single parent with a small child would theoretically find her cell phone use affected as thus: as a parent she is more likely to own a cell phone, but being single she loses the technological support of a technofiliac husband; however, since she is upper middle class, she is more likely to have a job that supports her use of new communication technology and is more likely to have the means to own such personal technology. Other scholars such as Thoits (1995) emphasized that it is imperative to see the social world through these kinds of structural factors (e.g., social class, gender, marital status, and parenthood status). She writes, "Demonstrations that differentiation, ranking, power, and norms truly matter for people's thoughts, feelings, and behaviors are our unique contribution as a discipline, at least within the social psychological realm" (p. 1240). It is most certainly true that such things affect technology use, and through technology use family members' attitudes toward the time they spend together.

Age: The Generational Divide

Technological adoption is not uniform. Younger generations adopt new technology first and are more likely to integrate that technology into their daily lives (Palfrey & Gasser, 2008; Tapscott, 1998). Regarding cell phone usage, teens talk on their cell phones more and send more text messages than their adult counterparts and only 57%

of adults aged 65 or older currently have a cell phone compared to 90% for those aged 18 to 29 and 88% for those aged 30 to 49 (Lenhart, 2010). Thus, there is clearly a generational difference between cell phone users and non-users, but whether that difference in usage is of major concern is an issue open to debate. While some scholars are concerned that decreased use of new technology by older adults limits their social freedom and restricts their ability to solidify their social relationships (Ling, 2008; McDaniel, 2002), others see technologies including new communication technology as having the ability to open new avenues of access as in the case of emergency assistance technology for the elderly and other applications that increase mobility and connection (Czaja & Barr, 1989).

Within the context of this research, the limited participation of older adults with new communication technology and in particular cell phones should be of concern. However, the current Pew data to be used does not include items addressing how adults report interacting with older family members using cell phones and other technology. Rather, my focus will be limited to an analysis of more immediate family interaction (i.e., family of procreation). It is important to be aware of these limits and more broadly of the issues older generations face when trying to adopt new technology. Having not grown up with such technology as the millennial generation has, older Americans see less space in their lives for this changing mode of communication. A problem arises when a disconnect occurs between expectations of use between the generations. Age differences are also important in regard to actual cell phone use (i.e., calls versus texting), with 51% of adults texting between one and ten times a day and 29% of teens texting over 101 times a day (Lenhart, 2010). These groups parallel each other more closely in regard to making and

receiving phone calls however: 58% of teens and 44% of adults report using their phone in this way between one and five times a day (Lenhart, 2010). These differences are all significant in that teens are more likely to use the newer technology (texting) while parents are just as likely to use the older technology (making a phone call).

The Digital Divide and the Ease of Use and Access

The digital divide is the divide between those who have access and ease of use with new technology and those who do not (Roberts and Foehr, 2008; Guillen & Suarez, 2005; Leonardi, 2003; Attewell, 2001). According to a recent Pew survey, almost 50% of Americans are uncomfortable with information technology, 10% are connected digitally, but find the technology intrusive, and 8% are avid users who feel they are too connected digitally (Horrigan, 2007). This means that almost 70% of Americans are either uncomfortable with information technology like cell phones and the internet, or do not use them altogether; this is a problem in a communication- connected society and further adds to the digital divide. Not surprisingly, race, but especially social class are relevant with respect to the digital divide, but this is most evident with respect to access to computers, and is likely less relevant with regard to cell phones (albeit, it is likely that use of apps, associated with 'smart' phones are affected with social class – if only because such access requires significant monthly fees). While only 32% of whites with an income of less than $30,000 report going online, 82% of whites with an income greater than $50,000 report going online (Lenhart, 2003). Only 25% of blacks with an income level below $30,000 report using the Internet, and that number increases to 65% when the income level for blacks exceeds $50,000 (Lenhart, 2003). The trends for Hispanic populations mirror that of whites, and these usage differences hold true for educational

level. The digital divide between those who use the Internet and those who do not becomes clear: with more education and higher income comes higher rates of online access.

Within the specific realm of cell phone use, however, at least 70% of all major income, education, race, and gender groups report owning a cell phone (Lenhart, 2010). While cell phone use appears to be more ubiquitous than Internet use, the problem then becomes those who have less access to this technology. Adults aged 65 and older are statistically the least likely to own a cell phone (57%), while those who completed college are statistically the most likely (90%) (Lenhart, 2010). Adults reporting an income of less than $30,000 are also statistically less likely to own a cell phone than higher income brackets (71%) (Lenhart, 2010).

Because of the evidence of this digital divide in class, and age, I will examine the bivariate relationships between these social structural variables and frequency of texting and making cell phone calls separately. While cell phones may be said to be less directly related to educational and social barriers, they are more connected to the functioning of the family (Devitt & Roker, 2009). A child without a home computer may have more difficulty completing a school report, but a child without a cell phone lacks access to their family members when they are not present. This brings in an altogether different sort of problem in the guise of connectivity. Studies tend to lump new technology together under the guise of "new media" and have yet to fully explore the process of adoption that children undergo (Wartella & Robb, 2007). What is clear is that exposure to new technology starts young and continues to increase until about middle school age where it peaks, with only a brief respite right as children start elementary school (Roberts and

Foehr, 2008), and it is likely that indicators of social class, such as whether an individual is employed in 'white collar' versus 'blue collar' employment affects technology exposure.

The Gender Divide

Gender also plays an important role in how technology is adopted and perceived. There is an ongoing argument about how gender affects technology use and to what end. While McQuillan and O'Neill (2009) argued that gender is still an important factor for understanding children's interaction with new communication technology, the most recent trend is to understand gender in the context of other factors. In looking at information technology students, Johnson, Stone, and Phillips (2008) found that self-efficacy and occupational stereotypes in conjunction with gender played a larger role in technological interaction than gender alone. Crump, Logan, and McIlroy (2007) similarly found that how women in information technology jobs perceived their job environment played a larger role in how they perceived their job than gender alone. Boyer and England (2008) explored the history of office technology, and found that over time most office technology has become feminized.

The feminization hypothesis further suggests that the gender divide in technology is lessening, and may be more complicated than previously thought (e.g., Aquirre-Urreta and Marakas, 2010; Mayall, 2008; Selwyn, 2007; Brynin, 2006; Dholakia, 2006). Caprile and Pascual (2011) found that basic gender equality progress itself is not linear, and that educational attainment does not bolster gender equality; in the context of information technology, the authors found that the field is shifting, and concluded that more research must be done to account for changing occupational, educational, and technological

trends. Wang and Wang (2010) found that values and social influence play a greater role in technology adoption than does gender. Cotton, Anderson, and Tufekci (2009) found no significant gender differences in middle school students use of cell phones for communication, but found that boys relative to girls were more likely to use non-social gadget features of their cell phones.

Wajcman (2007) posited a more feminist-based approach to understanding the relationship between gender and technology. She argued that while feminists were originally critical of technology's ability to empower women, in the 1990's feminist studies became overzealously positive regarding what technology could provide with respect to women's equality with men. Wajcman argued for a balance between technophobia and technophilia, and instead advocated that technology be judged from a more middle ground that would incorporate a more flexible, fluid understanding of both technological adoption and femininity. Building on this, Herring and Marken (2008) focused on gender consciousness as related to lived experience and careers in information technology, and the positive effects of such consciousness. Thornham and McFarlane (2010) put forth the idea that as women command new technology, they also buck generations of anti-feminist trends. In looking at female social workers and the introduction of new technology to the workplace, Lie (1997) found that the very presence of technology in the workplace changes how a worker reasons, and this is particularly true in a female-dominated profession like social work.

Fischer (1988) looked at the history of the telephone and argued that women appropriated this technological device, and turned it into a primary mode of communication. While Fischer was writing before the proliferation of cell phones, it is

easy to imagine how this trend might extend to cell phone usage. Colley et al. (2010) found that women tended to send far more picture text messages than did men, and that these messages were used for relationship maintenance. Cell phones were also being stylized for women to make them more female-friendly and to serve as fashion accessories (Shade, 2007; Foley, Holzman, and Wearing, 2007).

Marital Status

Just as spouses influence each others' behaviors, attitudes and values, it is likely that spouses can affect each others' technology use. Using the Cornell Couples and Careers Study (N=581), Chesley (2005) used paired couples data to investigate the factors that predict technology use. Chesley distinguishes between computer technology and communication technology, and focuses on the effect of work technology use and how spousal technology use affects respondent technology use rates. Technology use at Time 1 predicts use at Time 2. For women, working in the fields of health care, nonprofit, and small business significantly predicts computer use; having a child since Time 1, job flexibility, having a new job since Time 1, and computer use at Time 1 also significantly predict computer use. For men, age, job prestige, education, role performance, job scheduling flexibility, and previous computer use all significantly predict computer use at Time 2. Cell phone use at Time 2 is significantly predicted for women by age, having a college education, work hours, household income, and previous cell phone use at Time 1. For men cell phone use at Time 2 is significantly predicted by age, having some college education, utility, being self employed, job prestige, work load, job scheduling flexibility, having a new employer since Time 1, household income, and previous cell phone use at Time 1. Chesley concludes that while computer use tends to be individual,

communication technology like cell phones tends to be communal; she also found that while men influence their wives technology use, the reverse is not true.

Constant Connectivity and Quality of Home Life

Cell phones have a very unique function in our society in that their specific purpose is to enable those not physically present to engage the attention of others, and germane to this study, to gain the attention of spouses and children. Cell phone contact has the ability to take the individual out of the moment and focus his or her attention elsewhere (Kemker et al., 2009), an idea supported by the 30 states that have banned text messaging while driving and the eight states that have banned handheld cell phone use while driving (Governors Highway Safety Association, 2010; McGarva, Ramsey, & Shear, 2006). Cell phones divide attention in ways that other new communication technologies like personal computers cannot.

Recent literature has focused on this ability of cell phones to pull individuals out of their current situations and force them to be always available. In public settings, cell phones both allow for positive connectivity and immediate gratification for the user and for a negative separation from the social arena for those around the cell phone user (Schroeder, 2010; Licoppe, 2010; Wei & Lo, 2006; Humphreys, 2005; Leung & Wei, 2000). Attempts to reconcile both the desire to stay connected to those not present while not disregarding those present tend to manifest in different ways but all involve a forced compromise for both those present and not present. In other words, the cell phone user is constantly deciding between answering a phone call or text and remaining present in the current social situation or not. In the context of the family, the problem with constant connectedness becomes clear: if the family is always connected, they are not only

connected to each other, but they are plugged in when together. Cell phones present the potential to connect the family when they are separated, but cell phones also present the potential to separate the family when they are together.

Telepresence and Relationships

There has also been some investigation into whether all of this telepresence is truly negatively affecting social relationships or whether sharing the same physical space is as important to our social development as we have always believed. Recent scholarship investigated technology as an extension of the self and presented the view that technologically mediated communication is merely another relational style in the individual's social repertoire (Fortunati, 2005; Zerubaval, 1979). Traditionally, sociology has viewed otherwise. Although not the focus here, scholars have argued that mediated communication, like the communication that occurs in a cell phone conversation or conversation via text message, is best suited to less emotional and more functional conversations when the option of meeting in person is not available. This is particularly true of text messages, which are generally limited to around 160 characters and offer no, or very limited, context or vocal expression. A phone conversation has the added depth of expression of the voice, but a cell phone adds the additional problem of a user potentially being in public and subject to public social mores (Humphreys, 2005). Not surprisingly, misunderstandings via a cell phone conversation are not uncommon. It is unclear whether phone calls versus texting have different effects on satisfaction with time spent with family, but within the context of the literature it is evident that the different facets of connecting via cell phone have the potential to affect the relationship in different ways.

Connected Presence

Regarding family life, there has been research on how cell phones have affected child safety and how individuals have learned to navigate privacy and use rules within the household (Devitt & Roker, 2009); however, a focus on how constant connectedness is affecting families' satisfaction is less common (Christensen, 2009; Pettigrew, 2009). In talking about the creation of closeness while physically separated, a theory of connected presence has been posited that pulls in the positive aspects of cell phone use. Cell phones can be a functional and simple way to support an already strong relationship, but they can also be the source of stress. The research has its roots in studies of how the telephone has affected family life, in particular in how the adoption of the modern telephone changed the meaning of distance for familial closeness (Litwak & Kulis, 1987). Cell phones build on this existing reliance of telephones, but increase both the complications and benefits. While there is a body of previous literature that focuses on the effect of landlines and on the integration of the telephone into the home during the past century, the focus of this research will remain on the effect of cell phones on the family. As much as cell phones have the ability to connect individuals together, they also drive individuals apart by forcing individuals to be constantly available to others who are not physically present. It is this aspect that separates cell phones from landlines, and which makes the technology such an interesting one to study.

Much of the scholarship on how the use of cell phones affects family relationships remains theoretical as opposed to empirical. Rosenblatt and Li (2010) theorized that if talking on a cell phone distracts the driver from the road, then the road must also distract the driver from the conversation. By focusing on what the authors deem "relationship

safety" as well as "road safety," they highlight an important aspect of cell phone use: the potential for distraction and focus fragmentation. Serious conversations do occur on cell phones while driving and this has the potential to severely impair the family relationship.

Family Life Characteristics

Family Quality, Closeness, and Time Spent Together

What are some of the known correlates of satisfaction with family life? As early as 1939 scholars were investigating the qualities of a successful marriage; family background and the social life of the couple were seen to be important factors, as well as social factors connecting them to the community, including church attendance and work record (Burgess, 1939). Attitudes about leisure activities have also been found to be important predictive factors in both life and marital satisfaction (Gerson, 1960). Other factors include sexual satisfaction, conflict management, communication, and the strength of the family itself (Greeff, 2000). Companionship is also important for families and has been found to positively support life and family satisfaction (Zuo 1992, Hawkins, 1968; Otto, 1962; Conner et al. 1955). Gloriux et al. (2011) further specified that this positive companionship includes eating meals together, spending time together even while watching television, and enjoying social activities outside of the home together. Ritual in the family home and the meaning ascribed to it has been found to become more important as children age (Fiese, 1993).

Additionally, structural variables such as income and work life further play a role in satisfaction with family life including satisfaction with time spent with family. Higher status employees (i.e., white collar) are more likely to be satisfied with their lives altogether (Hodson, 2004), and wives who have never worked value financial security

above marital satisfaction (Freudiger, 1983). Financial stress heavily impacts quality of life and life satisfaction, including marital satisfaction (Berry & Williams, 1987). Overall stress has been found to play an important negative role in life satisfaction, while social support positively impacts life satisfaction (Pittman & Lloyd, 1988).

However, although the focus of this research is on satisfaction with time spent with family, an important caveat is that time spent with the family is not always positive. According to Fulton (1964), "the value of time tends to be judged in terms of its use" (p. 7). Keeping these ideas in mind, I briefly review family characteristics that may affect satisfaction with time spent with family. As such, these variables will also be controlled in the analytic models.

Socializing with Spouse

Whether joint spousal leisure time positively contributes to life satisfaction depends on the strength of marital communication (Holman & Jacquart, 1988), and the relationship between marital satisfaction and community involvement is curvilinear (Holman, 1988). Balance between cohesion and adaptability is also important (Roddick, Hanggeler, & Hanson, 1986). Wan, Jaccard, & Ramey (1996) found that the relationship between social support and life satisfaction differed by the source of the support: married mothers found the most positive social support from their families, while single mothers found strong positive social support from their own parents. The impact of joint leisure activities on marital happiness is much more complicated than simply spending or not spending time together (Orthner, 1975). Crawford et al. (2002) found the problem of joint leisure activity is a function of whether the couple is jointly pursuing activities they both enjoy; wives participating in joint activities that their husbands enjoy, but they do not,

increases wives dissatisfaction with their marriage. Couples tend to participate in separate activities as they age, but this does not necessarily impact life satisfaction (Kalmijn & Bernasco, 2001), and presumably family life satisfaction. Ultimately family time can be a positive experience, but it can also become a burden. Family time can begin to be seen as a burden, an obligation to the children in the family, and a stressor in that there is never enough time for it (Daly, 2001).

Work Spillover

The question then becomes how cell phone use is intruding into the family sphere, if at all. Questions have been raised about the possibility of technology increasing work spillover and vice versa which could increase stress for family members. There has been some debate about whether this effect has been exaggerated. Using a sample of individuals from Australian households (n=1255), Bittman, Brown and Wajcman (2009) explored these ideas by focusing on three main hypotheses: (1) perpetual connectivity increases the respondents feeling harried; (2) mobile phones are used as work extension technology; and (3) mobile phones intensify work. The survey was composed of both telephone and Internet interviews with a time diary component, and consisted of individuals over the age of fifteen. The authors propose that cell phone use has not increased stress in leisure time and that work spillover is much less than previously thought. Bittman, Brown and Wajcman found evidence to support the hypothesis that increased mobile phone use during work hours is associated with work intensification among men. Chelsey (2005) however disagrees. Using the longitudinal data of the Cornell Couples and Careers Study (N=1,367) and restricting the data to working couples only, the author focused on technology use (separated into mobile and computer

technology, but lacking sensitivity to texting), psychological distress (as measured by a five item depression scale), family satisfaction (measured by a scaled group of questions including time spent together, supportiveness, and affection), work spillover (measured by a four item scale including questions about the separation of work and family), and demographic data. These respondents were overwhelmingly married, upper middle class, and technologically savvy. Chesley found that not only does cell phone use increase work spillover into family life; it also increases distress and decreases family satisfaction. Cell phone use can increase distress because this level of connectivity allows the individual to work from home; however, working from home can 'take away' from time spent with family.

Using the longitudinal data of the Cornell Couples and Careers Study again, Chesley (2006) turned her attention to technology usage patterns by limiting the sample to couple-level data (N=581). The author found that regular technology use at Time 1 predicted regular technology use at Time 2, but while Internet technology non-users at Time 1 were highly likely to report regular use at Time 2, this was not the case for cell phone non-users at Time 1. Cell phone non-users at Time 1 were unlikely to report regular use at Time 2. Chesley suggested that there is a time lag between regular Internet use and regular cell phone use; this is not the case anymore evidenced by the recent Pew finding that 90% of Americans own cell phones.

Frisson (2000) however found that while new communication technologies are being used to solve time-pressure issues within families, those families do not perceive the use of technology as a useful tool to quell to their daily stress. The positive and negative effects of telework appear to depend on the family being studied. Hill, Hawkins

and Miller (1996) reported that while working from home can increase flexibility, but it can also increase stress within families as a result of the blurred boundaries. What is most clear is that technology is drawing our attention and increasing the pace at which we live our lives (Ropke, 2001). Telework is studied within this proposed thesis as one of the factors that characterizes how cell phone use affects family quality.

Eating Dinner Together

There has been investigations not only into the importance of the time families spend together, but also what that time constitutes. Parents and children define family time differently, and that difference of definition can create conflict (Snyder, 2007; Turtiainen, Karvonen, & Rahkonen, 2007; Asmussen & Larson, 1991). Amount and quality of family time also differs by income level and family structure (Maher, Lindsay, & Franzway, 2008; Lesnard, 2008; Tubbs, Roy, & Burtons, 2005). Families struggle to create that feeling of togetherness in a busy modern world, but agree that time together is important (Daly, 2001).

More specifically, eating meals together has been an important focus of scholars. Early on, Bossard and Boll (1950) wrote, "Families are projects in group living, which means that the techniques in group living need to be identified and stressed. Family rituals are one form of such technique, and possibly of the highest value" (p. I). Eating meals together is one such ritual within the family and has immense importance for family functioning. Mennell, Murcott, and Otterloo (1992) wrote, "Sharing food is held to signify 'togetherness', an equivalence around a group that defines and reaffirms insiders as socially similar" (p. 115). Commensality brings the family together, and how that time during the meal is spent is just as important as the act itself. Blum-Kulka (1997)

have explained that conversations during the dinner meal tend to focus on things of immediate family concern: how the day was spent, what's happening tomorrow in the family, other general concerns (p. 45). This conversation is not empty time filler, but rather works to reorient the family together.

Current research has focused not only on what that time means together, but also how that time may be changing. The amount of time families spent eating meals together declined from 51 minutes per meal in 1966 to 27 minutes in 1999, and the average frequency decreased from almost two meals a day to less than one in that same span of time (Mestag & Vandeweyer, 2005). The frequency of meal times spent together is also decreasing; in 1997 37% of parents reported eating dinner with their children seven nights a week, but that number decreased to 28% by 2003 (Mason, 2003). Family meals carry cultural meaning (Bugge, 2006; Brown and Mussell, 1984), and teach social manners, habits, and sex roles (Feiring & Lewis, 1987). Eating meals together synthesizes the family as a unit, helps to development personality traits, and encourages the transmission of cultural knowledge (Bossard, 1943); it also increases parent-child communication among racially diverse youth (Fulkerson et al., 2010). Fitzpatrick, Edmunds, & Dennison (2007), however, found that the powerful positive effects of eating meals together is underdone by having the television on during the meal, while telecommuting is associated with more frequent and healthier family meals (Allen, Shockley, & Poteat, 2008). Commensality itself is thought to play an important role in supporting our social relationships (Sobal & Nelson, 2003; Morrison, 1996).

STUDY AIMS

Based on the above literature review, I examine whether respondents who report using cell phones to communicate with their families report higher satisfaction with time spent with family. I also expect that working at home will affect satisfaction with time spent with family; the assumption is that working from home will increase the work spillover into the family life, and that technology will increase this blurring of boundaries. Whether a family has dinner regularly should influence satisfaction with time spent with family as well. The assumption is that families who have dinner together will already be close regardless of technology use. Finally I expect that whether a family is regularly social will affect satisfaction with time spent with family; the assumption is that a family who places an importance on socializing together will display a higher level of satisfaction. Because other research has found that socioeconomic status can affect technological usage rates and access (the problem of the digital divide), I account for the influence of the following variables, which may influence my results: education, income, race, gender, and job classification. Because previous research has also found that age plays a factor in the use of technology, I also control for age. Additionally, using interaction effects, I examine whether the effects of the cell phones are conditional on age and gender, respectively.

METHODS

Data

For this study, I examine data from the Networked Families Survey from the Pew Internet & American Life Project. The data were collected from December 2007 to January 2008. The survey is ideally suited to address my research questions in that it intensively questions respondents' new communication technology habits, life satisfaction, satisfaction with time spent with family, and demographic background. The Networked Families data set is a random digit sample of telephone numbers in the United States of adults aged 18 and over; analyses are limited to those who report having at least one child under the age of 18 in the home and who are currently married (N=417). The sample was achieved by random generation of the last two digits of telephone numbers on the basis of their area code, telephone exchange, and bank number. Call times and days were staggered and at least ten attempts were made to household. The sample demographics with respect to race are: 78.8% white, 9.7% black, 6% Hispanic, 4.2% other, and the reminder (2.3%) reported either "don't know" or refused. Due to the non-response bias that telephone interviews produce, the sample data are weighted using demographic weighting parameters that follow from the Census Bureau's March 2006 Annual Social and Economic Supplement Survey.

Measures

The dependent variable is satisfaction with the amount of time parents spent with their family. The variable *satisfaction with time spent with family* asks respondents: "In general, how satisfied are you with the amount of time you spend with your family?" Responses range from (1) dissatisfied to (3) satisfied.

Cell Phone Usage

Frequency of cell phone usage, based on prior literature showing different uses for cell phones is operationalized as four key independent variables: (1) calls to partner, (2) texts to partner, (3) calls to child, and (4) texts to child. The variable, *Calls spouse,* asks respondents: "Now thinking about how often you communicate with your spouse/partner when you are not in the same place. How often, if ever, do you call your spouse/partner from your cell phone?" Response categories include (1) never, (2) less often, (3) a few times a week, (4) at least once a day, and (5) several times a day. The variable, *Texts spouse,* asks respondents: "Now thinking about how often you communicate with your spouse/partner when you are not in the same place. How often, if ever, do you send text messages to your spouse/partner?" Response categories include (1) never, (2) less often, (3) a few times a week, (4) at least once a day, and (5) several times a day. The variable, *Calls child,* asks respondents: "Now thinking about how often you communicate with your child when you are not in the same place. How often, if ever, do you call your child/children from your cell phone?" Response categories include (1) never, (2) less often, (3) a few times a week, (4) almost every day, and (5) everyday. The variable, *Texts child,* asks respondents: "Now thinking about how often you communicate with your child when you are not in the same place. How often, if ever, do you text your child/children from your cell phone?" Response categories include (1) never, (2) less often, (3) a few times a week, (4) almost every day, and (5) everyday. Texting and cell phone use will be used to take into consideration generational differences and personal preferences with cell phone use. Both behaviors involve a high rate of connectivity that both draws attention away from the current situation and reaffirms social relationships.

Higher rates of texting and calling should be associated with higher levels of overall life satisfaction and overall satisfaction with how much time the respondent spends with his or her family.

Family Life Characteristics

To test hypotheses relating to the effects of working at home, preexisting closeness of the family, and already socially active families, three family life variables are used. The former is measured by *work at home*. *Work at home* questions respondents on how often they work at home with the responses being every day, almost every day, a few times a week, a few times a month, less often, and never. This will measure the potential work-family spillover (Chelsey, 2005). Preexisting closeness is measured by *dinner*, which asks how often the respondent has dinner with their family. *Dinner* is measured in terms of every day, almost every day, a few times a week, a few times a month, less often, and never. The assumption here is that families who eat dinner together often will be satisfied with how much time they spend together regardless of technological interference. Socially active families will be measured by the variable *socialize* in which the respondent is asked how often they socialize or have gatherings in their home with family and friends. The responses for the variable are almost every day, a few times a week, less often, and never. This is used to measure the perception that technology is isolating or taking the place of our in person social interaction (Kraut et al., 2002; Kraut at al., 1998).

Demographic Background

Age is included as a major structural independent variable to test the intergenerational differences in cell phone use. *Age* asks respondents, “What is your

age?" Response categories include (1) 18-24, (2) 25-34, (3) 35-44, (4) 45- 54, (5) 55-64, and (6) 65+. As a moderator it would function to alter the relationship between cell phone use and satisfaction with that cell phone use by dampening any positive effects increased use might have. Older adults would be less familiar with the technology and so their use of the technology would not necessarily increase their ability to use cell phones as effective tools for communication with their children or spouse. One might imagine a scenario in which the use of a cell phone carries frustration, especially if a parent is trying to communicate with a child who might have mastered the technology. As a mediator its effect would be stronger and would more negatively affect the relationship between cell phone use and satisfaction with that use. Instead of merely causing the use of the technology to create stress and frustration, *age* might cause older adults to reject the technology altogether. Instead of hampering the ability of older adults to communicate with their families, *age* might work to prevent them from being as accessible as their families might desire. Because this data focuses on families with children under the age of 18 and because cell phones have been widely in use for at least ten years, I predict that *age* will function as a moderator. The generation of current parents would theoretically be young enough to have been exposed to this technology that *age* would not significantly affect their interaction with cell phones or their satisfaction with these tools of communication. Older generation adults, more specifically the parents of the respondents of this data set (which represents data not present in the Pew study and thus not part of this research), would be more likely to encounter difficulty with cell phone technology; for them I would expect *age* to function as a mediator and have a significant negative effect.

In addition to the variables described above, several main social structural variables, which reflect individual location in the social hierarchy, are included. *Race* is composed of White, African-American, and Hispanic. Dummy variables are created for each race category, with white as the reference category. *White collar* is a dummy variable coded 1 if the responded reports working in a white-collar profession and 0 if the respondent reports working in a blue-collar profession. *Education* is a continuous variable specifying whether the respondent has attended some high school, is a high school graduate, has attended some college, is a college graduate, or has post college education. *Income* is a continuous variable specifying whether the respondent's total income in 2006 was less than $10,000, $10,000 to under $20,000, $20,000 to under $30,000, $30,000 to under $40,000, $40,000 to under $50,000, $50,000 to under $75,000, $75,000 to under $100,000, or $100,000 or more. *Gender* is a dummy variable coded 1 if the respondent is male and 0 if the respondent is female. Consistent with the literature, I expect to find a negative effect and no significance if the gender divide in technology is closing, or a positive effect and significance if the gender divide in technology is persistent. Interaction effects were also tested for *age* and *gender.* The variable age was dummy coded so that 18-44 (categories 1-3) were 0 and 45-65+ (categories 4-6) were 1. In this way the effect of being older could be tested on the various calling variables. Both the interaction between *age* and *calls spouse*, and *age* and *calls child* were created for the first set of models, and *age* and *texts spouse*, and *age* and *texts child* were created for the second set of models. Interactions were also created in this manner for *gender* to test the effects of being male on the main independent calling variables. *Gender* and *calls spouse,*

as well as *gender* and *calls child* were created for the first set of models, and *gender* and *texts spouse* as well as *gender* and *texts child* were created for the second set of models.

Analytic Strategy

My primary hypothesis is that as cell phone use increases, satisfaction with time spent with family will increase. For my multivariate analysis I conduct an ordinary least squares (OLS). My first model consists of the cell phone use variables. The second model will introduce *work at home* with the expectation that working at home decreases satisfaction with time spent with family as per Chelsey's spillover theory. The third model will introduce the variable *dinner* and should account for families who already maintain a high level of familial closeness. The fourth model will introduce the variable *socialize* to account for those families who already show a high level of social engagement as per Kraut's theories on technological isolation. The fifth model will begin to include the interaction effects, starting with *age* and *age* and the first *spouse* variable. The sixth model will add *age* and the first *child* variable; the seventh model will add *gender*, and *gender* and the first *spouse* variable; and the eighth model will add *gender* and the first *child* variable. The final model will include the remaining structural variables *white collar*, *education*, *income*, and *race*. While I expect to find that these additional factors account for some effect of cell phone use, I still expect to find that cell phone use will significantly affect satisfaction with time spent with family. In Table 1 I report the means, percentages, standard deviations, and ranges for all the variables used in the multivariate analyses. The control variables are distributed over the larger sample (n = 417) and the dependent variables in reference to the appropriate analytic sample. Correlations are shown in Table 2. Multivariate models are shown in Tables 3 and 4 that

include income and take into account the other social factors derived from prior research on predictors of technology use. These social structural variables include race, job classification, education, working status, and age. These are also indicative of location in the social structure.

RESULTS

The majority of respondents appear to be satisfied with time spent with family. Nearly 55% (n=229) of the sample reported being very satisfied, 34% (n= 142) reported being somewhat satisfied, and 11% (n=46) reported not being satisfied with time spent with family (not shown). In Table 1, I compare mean levels of satisfaction with time spent with family by the nominal-level variables in my analyses (i.e. race, occupation, marital status and gender). There is not a statistically significant difference in terms of satisfaction with time spent with family when comparing mean scores for those respondents who report having worked at home (n=261) versus those who report never having worked at home (n=156) (2.38, and 2.31, respectively). In looking at race when comparing mean scores, respondents who categorized themselves as white (n=296), and black (n=71) have a statistically significant difference (2.41, $p < .01$; 2.56, $p < .1$, respectively). Those who reported being Hispanic (n=51) are statistically different when comparing mean scores (2.37). When comparing mean scores for occupation, respondents who report working in a white-collar profession (n=178) with those report working in a blue-collar profession (n=239), we see that there is a statistically significant difference (2.25 versus 2.40, $p < .05$). When comparing mean scores for gender, those respondents reporting their gender as male (n=187) versus those respondents reporting their gender as female (n=230) have a statistically significant difference (2.37, 2.5, $p < .05$).

In Table 2, I present Pearson Correlation Coefficients for satisfaction with time spent with family and cell phone use variables, family life characteristics, and demographic background. The variables call spouse and call child are significantly

correlated (.268, $p < .001$), which is to be expected. The variables calls child and texts child are also significantly correlated (.355, $p < .001$), which is also to be expected. As evidenced by the literature, those users of one technology tend to be users of other technologies. The variable socialize is significantly correlated with the variable call spouse, and also text child (.103, $p < .05$, and .288, $p < .001$, respectively). This concurs with the earlier hypothesis that those respondents who were more social would also be more likely to engage in technology to connect with their families. Socialize is also significantly correlated with satisfaction with time spent with family (.089, $p < .05$); this also supports an earlier hypothesis. The variable dinner is also significantly correlated with the variable satisfaction with time spent with family (.207, $p < .001$), but significantly negatively correlated with income (-.097, $p < .05$). Income is also significantly negatively correlated with the variable call child (-.147, $p < .010$), and text spouse (-.110, $p <. 10$). Income is significantly positively correlated with both age (.138, $p < .05$), and education (.497, $p < .001$). Education is also significantly negatively correlated with the variable text spouse (-.102, $p < .10$) and the variable socialize (-.098, $p < .05$). Education is significantly positively correlated with the variable age (.123, $p < .01$). Age was also significantly negatively correlated with the variables call spouse (-.122, $p < .05$), text spouse (-.137, $p < .05$), and text child (-.156, $p < .10$).

In Table 3 I present satisfaction with time spent with family regressed on the two calling variables, family life characteristics, and demographic background, including interaction effects. In Model 1 the frequency of calling spouse and calling child are not significantly related to satisfaction with time spent with family. Model 2 adds the variable work at home, which is not significantly related to satisfaction with time spent with

family, but is in the negative direction. In Model 3 having dinner with family is added; as expected and consistent with prior research, it is significantly positively related with satisfaction with time spent with family ($p < .001$). In Model 4 the frequency of socializing within the home with friends is added, but is not significant. As in Model 3, having dinner with family remains significant ($p < .001$). In Model 5, age and the interaction variable for call spouse and age are added, but only age itself is significant ($p < .10$). Model 6 adds the interaction variable age and call child, but this is not significant. Model 7 includes the previous variables and adds gender, as well as the interaction variable gender and call spouse. In this model age becomes significant at the $p < .10$ level. In Model 8 the interaction variable gender and call child are added, but are not significant. Age and call child, age, dinner, and work at home all remain significant. Model 9 includes all previous variables and adds demographic characteristics. The variable reporting white becomes negatively significant at the $p < .05$ level.

In table 4 I examine all the same variables except the cell phone variables, substituting calling spouse and calling child with texting spouse and texting child. In Model 1 none of the variables are significant. In Model 2 working at home is added, but is not significant. In Model 3 having dinner together is added and is significant at the $p < .10$ level. Working at home also becomes significant in this model and is negatively associated with the dependent variable ($p < .10$). Model 4 adds socializing within the home with friends, and this is negatively significantly associated with satisfaction with time spent with family ($p < .10$). We also see that texting child has become significantly positively associated with satisfaction with time spent with family ($p < .10$). Working at home and having dinner together also remain significant. In Model 5 age is added, as

well as the interaction variable age and texts spouse, but neither are significant. In this model both socialize and work at home increase their significant to the $p < .05$ level. For Model 6 the interaction variable age and text child is introduced, and is significant at the $p < .10$ level. The significance of work at home also increases in this model to $p < .01$. Gender, and the interaction variable gender and text spouse are added in Model 7, and are not significant. Work at home also loses significance in this model, dropping to the $p < .10$ level, and socialize gains significance at the $p < .10$ level. In Model 8 the interaction variable gender and text child are added, but are not significant. Model 9 demographic characteristics are added; working at home, socialize, and age and text child remain significant. No demographic characteristics become significant in this model.

DISCUSSION

These results paint a complex picture of the technologically connected American family. In Table 2 we see that call spouse and call child are significantly correlated, as well as call child and text child. As evidenced by previous literature, people who are users of one technology are more likely to use other technology (Chesley, 2005). Technology use is something that builds and increases over time with familiarity. Socializing with friends in the home was also found to be significantly correlated with call spouse and also text child; this also follows previous literature in that technology is unlikely to produce new behaviors but rather increase old behaviors (Kraut et al., 2002; Kraut at al., 1998). If a respondent is already highly social, it follows that the respondent would also be more likely to use technology to stay in contact and maintain that social connection. Income was negatively correlated with text child and text spouse; work spillover might account for this negative relationship. Following this, education was negatively correlated with both the variables text spouse and socialize. Higher education and income might increase time constraints and lead to less time to reach out through communication technology. Age was also found to be negatively correlated with call spouse, call child, and text child. As found in the literature (Palfrey & Gasser, 2008; Tapscott, 1998), this is a significant age disparity when it comes to technology use. Older Americans are less likely to avail themselves of new communication technologies to maintain relationships, but that gap is closing as the Millennials come of age and the technology becomes more pervasive.

The most significant findings in Table 3 include the relationship between satisfaction with time spent with family and frequency of the family eating dinner

together. Eating dinner together plays a significant role in how the family perceives satisfaction with the time they spend together. While dinner is traditionally understood to have a positive effect on family life, research does suggest that being distracted during this time of connection can detract from any positive effects (Fitzpatrick, Edmunds, & Dennison, 2007). Since this data lacks measures for evaluating when cell phones are being used separate from the family to stay in contact and when cell phones are being used when with the family to distract, it is impossible to say at this time what effect cell phone use is having on that quality time. It is important to note that the only cell phone use variable that became significant was text child in Table 4, Models 4 and 5. Without measures to categorize the uses of cell phones and the times at which they are being used, it is difficult to say whether the positive effects of cell phone use are being overridden by their use as a distraction during family time. It is also important to note the lack of tone and context information about the cell phone contact; a negative text message is very different from a supportive one, and a negative phone call is very different from a phone call intended to a support a social relationship. In both tables however working at home did become negatively significant in later models, which suggests a connection between work spillover and lower satisfaction with time spent with family. In Table 3 age was also significantly negatively associated with satisfaction with time spent with family, although this did not hold true for Table 4. Work spillover might account for this as well, since an older respondent might hold a higher position of employment and thus carry more work related stress home.

Limitations

Recently there has been a call to understand not only how the family is using these new technologies but to what end (Chesley, 2006; Meszaros, 2004; Hughes Jr. & Hans, 2001). Both Meszaros (2004) and Hughes Jr. & Hans (2001) offer reviews of the current research trends. Meszaros (2004) focuses on the problem of tracking the data itself, how technology affects families, how children experience new technology, and future research directions. While the article's primary concentration is the Internet and computer usage in families, it serves to underscore how little we know on the subject. Similarly, Hughes Jr. & Hans (2001) focus on the effect of the computer and Internet access in families, and offer concurrent analysis. The authors agree that more research is needed in the field. Generally measures of satisfaction and happiness are missing from the data, which severely stunts an understanding of the context of any information gathered. While it is important to know how often families text each other or call each other on the phone, it is arguably more important to know how this contact is affecting how they relate to each other.

This research is limited by its sample demographics and the questions asked by Pew. Since no one under the age of 18 was surveyed, there is a lack of data from the perspective of the children and young adults in the study. Since the younger generations represent the digital natives, it is imperative to understand their perspective and how they perceive the burgeoning world of communication technology. On the opposite end of the spectrum, the relationship between older Americans and how they use (or do not use) communication technology to keep in touch with their children remains unexplored. By focusing the research on respondents with children under the age of 18 in the household,

respondents with older children living outside of the home were excluded. There is also a lack of longitudinal data in the research.

Future Work

Since I did not find cell phone usage to significantly influence satisfaction with time spent with family, I must ask why. There could be several reasons: cell phone use has no effect on this dependent variable, and perhaps I should be looking at a different variable (e.g., more specifically, satisfaction with time spent with spouse, or kids respectively); or perhaps the effect of the frequency of cell phone use differs by gender or one of the other social structural variables. However, it is likely that the meaning of the call, and not the frequency, likely affects satisfaction. It would be useful if another dependent variable could be not time, but satisfaction with the quality of one's home life. Unfortunately this was not in the data.

New communication technologies are only beginning to be explored within a sociological framework. Future directions might explore how older adults communicate with their adult children and vice versa, including the adaption of modified communication technologies for those older adults. These communication technologies are also affecting existing relationships, as in the case of divorced or alternative family structures. Texting and emailing can provide a less intimate form of communication for ex-husbands and wives who still need to be in contact about their children, non-custodial fathers can interact with their children through shared pictures and video via cell phones and traveling couples can keep in touch through Skype, the video chatting service. If sociology is to continue to effectively study human relationships, it must keep current with interaction trends.

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APPENDIX

Table 1. Mean Scores on Satisfaction with Time Spent with Family by Work at Home, Race, Occupation, and Gender

Work at home (n=417)	
Yes *(n=261)*	2.38
No *(n=156)*	2.31
Race	
White (n=296)	2.41**
Black (n=70)	2.56†
Hispanic (n=51)	2.37
Occupation (n=417)	
White Collar *(n=178)*	2.25*
Blue Collar *(n=239)*	2.40*
Gender (n=417)	
Male *(n=187)*	2.37*
Female *(n=230)*	2.5*

Table 2. Pearson Correlation Coefficients for Satisfaction with Time Spent with Family and Cell Phone Use Variables, Family Life Characteristics, and Demographic Background

	Satisfaction with Time Spent with Family	Call Spouse	Call Child	Text Spouse	Text Child	Dinner	Socialize	Age	Education	Income
Satisfaction with Time Spent with Family										
Call Spouse	.000									
Call Child	.034	.268***								
Text Spouse	.096	.150*	.050							
Text Child	.122	.101	.355***	.201						
Dinner	.207***	-.049	-.033	-.015	-.016					
Socialize	.089*	.103*	.036	.012	.288**	.019				
Age	-.016	-.122*	-.037	-.137*	-.156†	-.056	-.041			
Education	-.069	.007	-.048	-.102†	-.081	.047	-.098*	.123**		
Income	-.097*	.046	-.147**	-.110†	-.025	.020	.038	.138**	.497***	

† p <.10 * p<.05 ** p<.01 ***p<.001. Source: The Pew Internet & American Life Project (n=417)

Table 3. Satisfaction with Time Spent with Family Regressed on Family Life Characteristics, and Demographic Background

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	SE	B	SE	B	SE	B	SE	B	SE
Intercept	2.084***	.199	2.105***	.213	.740*	.364	.673**	.403	1.281*	.584
Cell Phone Use										
Calls Spouse	.015	.048	.015	.048	.026	.046	.023	.047	.010	.056
Calls Child	.044	.037	.044	.037	.033	.035	.033	.035	.052	.038
Family Life Characteristics										
Work at Home			-.031	.104	-.075	.100	-.087	.100	-.178†	.104
Dinner					.261***	.058	.261***	.058	.254***	.062
Socialize							.035	.087	.028	.095
Demographics										
Age									-.178†	.119
Age*Call Spouse									.057	.048
Age*Call Child										
Gender (Male)										
Gender*Call Spouse										
Gender*Call Child										
White Collar										
Education										
Income										
Race (White)										

† p <.10 * p<.05 ** p<.01 ***p<.001. Source: The Pew Internet & American Life Project (n=417)

Table 3. Continued

	Model 6		Model 7		Model 8		Model 9	
	B	SE	B	SE	B	SE	B	SE
Intercept	1.181	.581*	1.046†	.595	1.045†	.597	1.198	.645†
Cell Phone Use								
Calls Spouse	.064	.062	.115	.071	.115	.071	.112	.071
Calls Child	.004	.045	.002	.045	.002	.045	-.019	.046
Family Life Characteristics								
Work at Home	-.175	.103†	-.195†	.104	-.197†	.105	-.228†	.108
Dinner	.277***	.063	.275	.063	.274***	.064	.272***	.066
Socialize	.019	.094	.015	.094	.015	.095	.035	.095
Demographics								
Age	-.202†	.118	-.198†	.118	-.195†	.120	-.213†	.121
Age*Call Spouse	-.068	.080	-.070	.080	-.069	.081	-.075	.081
Age*Call Child	.145	.075	.145†	.076	.143†	.077	.160†	.076
Gender (Male)			.560	.472	.551	.477	.573	.492
Gender*Call Spouse			-.155	.114	-.158	.116	-.165	.119
Gender*Call Child					.010	.066	.006	.066
White Collar							-.038	.115
Education							.042	.042
Income							-.016	.044
Race (White)							-.257†	.145

† p <.10 * p<.05 ** p<.01 ***p<.001. Source: The Pew Internet & American Life Project (n=417)

Table 4. Satisfaction with Time Spent with Family Regressed on Family Life Characteristics, and Demographic Background

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	SE	B	SE	B	SE	B	SE	B	SE
Constant	1.955***	.177	2.047***	.192	1.025†	.526	1.711**	.679	2.577**	.831
Cell Phone Use										
Texts Spouse	.050	.063	.046	.063	.044	.061	.026	.062	.007	.068
Texts Child	.099	.059	.117	.060	.113†	.059	.132*	.060	.142*	.059
Family Life Characteristics										
Work at Home			-.197	.161	-.268†	.161	-.277†	.159	-.315*	.155
Dinner					.204*	.098	.184†	.098	.167†	.093
Socialize							-.261†	.166	-.379	.162*
Demographics										
Age									-.159	.166
Age*Texts Spouse									.086	.106
Age*Texts Child										
Gender (Male)										
Gender*Texts Spouse										
Gender* Texts Child										
White Collar										
Education										
Income										
Race (White)										

† p <.10 * p<.05 ** p<.01 ***p<.001. Source: The Pew Internet & American Life Project (n=417)

Table 4. Continued

	Model 6		Model 7		Model 8		Model 9	
	B	SE	B	SE	B	SE	B	SE
Intercept	3.012***	.838	2.944***	.844	2.762**	.866	3.215**	.988
Cell Phone Use								
Texts Spouse	.044	.068	.046	.070	.054	.070	.045	.077
Texts Child	.060	.070	.035	.073	.080	.086	.096	.091
Family Life Characteristics								
Work at Home	-.309**	.151	-.290†	.152	-.288†	.152	-.281†	.170
Dinner	.154†	.091	.157†	.093	.165†	.093	.157	.096
Socialize	-.354	.159	-.320†	.162	-.308†	.152	-.286†	.170
Demographics								
Age	-.280	.173	-.279	.174	-.284	.174	-.254	.182
Age*Text Spouse	-.042	.121	-.059	.122	-.047	.122	-.018	.131
Age*Text Child			.203†	.096	.204	.096	.190†	.102
Gender (Male)			-.292	.297	-.119	.344	-.026	.386
Gender*Text Spouse			.089	.072	.113	.076	.085	.087
Gender*Text Child					-.115	.115	-.115	.121
White Collar							.028	.186
Education							.036	.066
Income							-.098	.081
Race (White)							-.128	.200

† p <.10 * p<.05 ** p<.01 ***p<.001. Source: The Pew Internet & American Life Project (n=417)