The Net Generation at Work: Younger Employees' Understanding of Productive/ Counter-productive Information across Communication Channels

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ABSTRACT

Organizations are increasingly implored to engage in communicative accommodation based on employees' generational cohort. While previous research has found generational differences in workplace values, empirical evidence has not supported the popular claim that younger generations prefer more technological communication than their older colleagues. Using media richness theory (MRT), social presence theory (SPT), and channel expansion theory (CET) as a framework, this dissertation analyzes the responses of 382 Net Generation-aged (18-27 years old) participants to questions related to communication channel preference, information type, channel familiarity, and productivity/counter-productivity at work. Significant differences were found between communication channels across five types of common workplace information, with face-to-face being the most preferred channel for the Net Generation in four out of five information categories. Bivariate regressions revealed strong linear relationships between the productivity of a communication channel and participants' self-reported task completion, morale, stress, and trust levels.

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CHAPTER ONE

INTRODUCTION AND GENERAL INFORMATION

Organizational Challenges and Changing Technologies

Organizations are challenged to effectively manage four generational cohorts, each with unique differences and similarities, while at the same time deal with rapid developments in communication technologies—technologies that have radically changed the nature of human communication between individuals and organizations in today's workplace (Lee, Shin, & Higa, 2007; Turek, 2004). Effective communication is considered to be a leading contributor to strong financial performance in organizations (Hynes, 2016). For example, Towers Watson, a global company that provides global capital and management consulting services, conducted research examining the effect of communication on a company's bottom line for 651 organizations from a broad range of industries and regions over a ten-year period. Study findings determined that companies that communicated effectively were 3.5 times more likely to significantly outperform their industry peers than those companies that did not communicate effectively (Towers Watson, Inc., 2014).

According to Kupritz and Cowell (2011), communication technologies have not only redefined the channels of workplace communication for a multigenerational workforce but overall workplace structures and organizational design: "The speed of development and spread of advanced information technology is for many organizations *the* issue to consider" (Furnham, 2005, p. 657). These considerations range from internal and external communication, teleconferencing, virtual teams, telecommuting (teleworking), 24/7 connectivity to email, and work/life balance conflicts (Tourish & Hargie, 2004).

The choice of communication channels (media) used by an organization is often dependent upon available technology, customer and workforce characteristics, diversity, globalization of labor and customer markets, economies, and information (Axley, 2000). Although the benefits of effective face-to-face communication between managers and staff are widely appreciated, the costs associated with this mode of communication require organizations to make decisions about when scarce resources should be allocated for face-to-face communication and when the alternative, less costly resource of electronic communication can be substituted (Kupritz & Cowell, 2011; O'Mara, 1999).

Effective communication technology is crucial in today's organizations. Critical functions, such as training new employees and interviewing potential hires now take place in a virtual environment, with strong effects on a company's bottom line (Olaniran, 2009). There is a greater potential for message misunderstanding and conflict because workers can no longer rely on long-term organizational knowledge of personal styles, previous experiences and established social norms of interaction with those they communicate with – their coworkers, external suppliers, shareholders, cross functional teams, etc. Constant organizational change in the form of mergers, acquisitions, outsourcing, and strategic change has been affected by a shortened institutional memory.

This is especially true in certain mediated situations, such as CMC (computer-mediated communication), where people may not have a long-term organizational memory of how to convey/interpret contextual cues embedded in text. Selecting the appropriate media choice brings with it new communication challenges as organizations attempt to effectively integrate the right technologies into work practices and to modify those practices to take advantage of new technical opportunities (Kupritz & Cowell, 2011).

Partly in response to the changing nature of internal communication practices, research for several decades has analyzed the types of media used by managers to communicate with their employees and to evaluate the appropriateness of their media choices (Stein, 2006). Clearly, organizational communication research examining the use of communication technologies has determined a broad range of influences impacting its use in the workplace. These influences range from taxonomies for general types of messages sent (such as task delegation, project management, reminders, and information exchange) to decision rules for managing e-mails received; task characteristics to user characteristics; and from medium characteristics to the social environment (Kupritz & Cowell, 2011). Beyond the obvious cost-cutting benefits of computer mediated communication, video-conferencing is now being used in organizations for training, distance learning, brainstorming, and interviewing (Olaniran, 2009).

A large portion of research on communication technologies has addressed media choice and use, including those for managers or subordinates, more so than the specific types of messages transmitted or the effectiveness of the particular channel in conveying those messages (Kupritz & Cowell, 2011). However, management also need to know how organizational media choices affect different generations in the workplace. The flow of information in today's workplace—saturated with profound information overload, multi-tasking and interruptions—is "mediated by an ill understood array of technologies, at-hand resources, and shifting teams of people" (Kirsh, 2000, p. 16). There is a dearth of research relating to the ways different generations are impacted by the way information is provided to them.

This dearth necessitates the urgent organizational need to identify the most effective communication channels with which messages are conveyed along with the specific types of messages to be conveyed to a multigenerational workforce. "Today's employees do want high-

tech and sophisticated communications, but they also want personal contact with their managers. Understanding this fact is the cornerstone of an effective internal communication system" (Argenti, 2003, p. 139).

Organizations were initially warned of increased generational conflict in the workplace with the advancement of communication technologies (e.g., Zemke, Raines, & Filipczak, 2000). No industry is untouched by the generational divide. From public relations (Van Dyke, Haynes & Ferguson (2007) to banking to internal auditing (McDonald, 2008), to higher education (Cowell, 2010), organizations have strategized on how to operationalize work practices to accommodate generational differences. The latest research and practice now recommend that organizations "search for commonalities that calibrate the workplace and pull the generations to a place of parity" (Cowell, 2010, p. 6) in addition to supporting the needs of different generational cohorts (Bell & Berry, 2007; Deal, 2007). Indeed, Cowell (2010) determined that employee preference for receiving information from management through different media was not so much a factor of a particular generation as the type of information being communicated.

While the effect of communication technologies on the multigenerational workforce is a worldwide concern, inconsistencies in the literature and in practice particularly exist regarding the latest generation to enter the workforce, the Millennial Generation (Kowske, Rasch, & Wiley, 2010). The Millennial Generation is also known as the Net Generation, or Digital Natives (So, Choi, Lim, & Xiong, 2012). According to Tapscott (1998) the Net Generation is "growing up digital" in a way that makes these individuals more technologically savvy, and more intelligent than Boomers were at the same age when comparing raw intelligence quotient scores (p. 99). However, popular culture's growing interest in the Net Generation problem brings with it a lack of clarity regarding who is a part of the Net Generation, when they were born, and what

they should be called. Therefore, for the purposes of this study, the Net Generation is defined as the youngest subset of the Millennial Generation, currently aged 18-27.

Younger generations are entering the workplace in increasing numbers and bringing with them new practices and values (Smith & Galbraith, 2012). Baby Boomer and Generation X managers have struggled for many years to find a way to "deal with" the differing views and expectations of Millennials, to little avail. If a clear-cut manner to study these phenomena existed, we would likely have arrived at some conclusions by now. However, Baby Boomers, and to a lesser extent, Generation X-ers, are still struggling to manage the changing expectations of their younger staff. Managing generational cohorts in the age of rapid technological advancement is a chief concern for employers and researchers across fields.

The number of Millennial employees in the workplace is also increasing rapidly, and will only grow as the Net Generation joins their older cohort members. According to the Pew Research Center, Millennials surpassed Generation X in terms of workplace population in 2015, and surpassed the Baby Boomers shortly before that (Fry, 2015). In addition to making up a larger portion of the workforce, Millennial employees are also experiencing a smaller gender-based wage gap than ever before. According to a report by the White House Council of Economic Advisors, Millennial women are making 93 cents for every dollar their male counterparts make, the smallest gap in U.S. history (2014). These data suggest that this generation will become the most diverse, technologically savvy, and optimistic workforce in the United States (Fry, 2015; White House Council of Economic Advisors, 2014).

Even an inattentive news consumer has heard something about Millennials entering the workplace. For each negative personality trait attributed to Millennials, a positive flip side also exists. For every article that claims Millennials have short attention spans caused by an over-

reliance on smart phones, another touts the tech-savvy entrepreneurship of Digital Natives. Where one says Millennials are poor team players, another extols Millennials' tolerance for diversity. Interestingly, popular news sources who once incited distrust and frustration with Millennials are now reconsidering earlier rants. *U.S. News and World Report* recently released "Five workplace stereotypes about millennials that aren't true: Don't believe these unfounded criticisms" (Green, 2015). *Fortune* also retracted earlier claims with its "Five myths about Millennials in the workplace" (Baird, 2015, para. 1). These retractions coincide with data from the Bureau of Labor Statistics (Tossi, 2012) suggesting that Millennials will make up half of the U.S. workforce by 2018. Further, data from the Pew Research Center suggest that Millennials are not that different from older generations in terms of workplace communication and training (Fry, 2015). Considering the hype and hyperbole surrounding these workers, a thorough examination of the channel preferences of these employees is needed.

While much has been said *about* the Net Generation, little is known about their *actual* understanding of workplace communication practices. The present study examines this understanding. The study further explores Cowell's 2010 assessment of generational perceptions of communication from management. The 2010 study focused on two age cohorts Traditionalists/ Baby Boomers and Generation X/Millennials. (Cohorts were combined due to a smaller number of Traditionalist and Millennial Generation participants). Cowell recommended that future studies target younger Millennials in particular, as the sample size for this subgroup was small compared to the older Millennials in the 2011 study. The goal of the present study is to provide management with effective messaging strategies for communicating with the Net Generation. The objectives of this dissertation are to determine the following: how the Net Generation understands and selects communication from management across channels; and how

the Net Generation understands productive/counter-productive communication from management.

CHAPTER TWO

LITERATURE REVIEW

Cohort Constitution

Generational cohorts are regularly studied in the fields of education (Alexander & Sysko, 2012; Bekebrede & Warmelink, 2011; Coomes & Debard, 2004), nursing (Earle, Myrick, & Yonge, 2010; Hahn, 2011; Weingarter, 2009), management (Cannamo & Gardener, 2008; Favero & Heath, 2012; Gursoy, Maier, & Chi, 2007; Hernaus & Vokic, 2014), and communication (McCann & Giles, 2007; Ogbede, Fenich, Scott-Halsell, & Kesterson, 2013; Schullery, 2013). Additionally, the fields of engineering, hospitality management, occupational therapy, sports psychology, sociology, psychology, and political science have offered solutions to intergenerational communication problems. Multiple generations working side by side is a common sight in today's organizations. Paired with advances in workplace communication technology, variations in age and techno-literacy levels lead to workplace conflicts and misunderstandings. Much research has been dedicated to the concept of "managing" the generations. However, generational differences are still rooted in stereotypes and the cohort descriptions themselves vary in start/end dates. The following response will provide an overview of theoretical orientations used to define generations, describe generational cohort characteristics, and provide a rationale for studying the communication preferences of millennials and the Net Generation.

Karl Mannheim (1952) addresses the problems inherent in defining a generation. Mannheim's work, in part, is a reaction to earlier analyses which used a Marxist lens to consider socioeconomic status as the arbiter of social change (Eyerman & Turner, 1998). Mannheim considers the socialization effects of feelings of belonging, beliefs in future potential, and the

process of culture as important identifiers of a generation (Pilcher, 1994). He is, in fact, careful to avoid labeling generations *as* age groups due to their fluidly constructed nature.

Mannheim (1952) distinguishes between concrete groups and shared social location as indicators of generational identity. *Concrete groups* are those groups of individuals organized for a specific purpose. Examples include families, tribes, or sects, which Mannheim calls *community group*s, because these groups serve to organize and perpetuate community life. Community groups are distinct from *association groups,* which organize to achieve specific goals. Examples include businesses and political parties, which are choicely co-constructed by communication of shared histories, written statutes and binding resolutions. Concrete groups can be joined or abandoned, by choice or circumstance, resulting disassociation from the organizing mechanism.

Distinct from concrete groups is Mannheim's concept of *social location*. Generational status is a function of social location, similar to economic status. A generation's "similarity of location can be defined only by specifying the structure within which and through which location groups emerge in historical-social reality" (Mannheim, 1952, p. 290). While generations may share a biological pattern of life and death within similar years, Mannheim suggests that the shared sociological relevance of these years matters more than a birth date. One's birth date is simply a positioning device within the larger social structure in which one lives. While a birth date is significant, the shared social reality of existing within a particular time frame is a better subject of study than the notion of a "cohort" defined explicitly by years on Earth.

Mannheim (1952) suggests that the social location of a generation can be identified by five characteristics of a dynamic society:

> "(1) New participants in the cultural process are emerging, whilst (2) former participants in that process are continually disappearing; (3) members of any one generation can

> participate only in a temporally limited section of the historical process, and (4) it is therefore necessary continually to transmit the accumulated cultural heritage; (5) the transition from generation to generation is a continuous process" (p. 292).

This, more than any other quote about generational change, suggests the social construction of reality through communication. Because older generations do not simply exit the workplace as new generations arrive, the interactions between these generations produce and reproduce organizational structures through communication. Generational change is a gradual process, which helps explain the modern disagreements about just when Millennials began to exist. According to Eyerman and Turner (1988), a "generation survives by maintaining collective memory of its origins, its historical struggles, its primary historical and political events, and its leading characters and ideologists" (p. 97).

Defining the Generations

Before we can address the concerns of multigenerational workplaces, it is necessary to outline the characteristics of each cohort. The section that follows answers several questions about cohorts. We must understand who constitutes each cohort and the characteristics attributed to these cohorts to fully understand this phenomenon. Some debate exists regarding when one generation ends and another is born because these generations are discussed as socially constructed, or as determined by biological age. Strauss and Howe (1991), for example, offer slightly different dates than Smola and Sutton (2002) or Sessa et al. (2007). Strauss and Howe do consider the socioeconomic and political events critical to defining a cohort. However, because a phase of life lasts roughly 20 years, they note that each cohort should last for roughly 20-22 years, rather than the 10 or less that others propose.

Strauss and Howe (1991) identify three cohort indicators, making up what they call a peer personality: "(a) common age location, (b) common beliefs and behaviors, (c) perceived membership in a common generation" (p. 8). For any generation to be considered a cohort, it must first recognize the common traits of its members and the differences between their own members and the previous and successive cohorts. If individuals were not recognizing these differences and responding to them, there would be no need to study communication in the multi-generational workplace.

Traditionalists. Traditionalists, also called the "Silent Generation" or "Veterans," are those born prior to 1945 (Hernaus & Vokic, 2014; Strauss & Howe, 1991). More specifically, Smola & Sutton (2002) consider Traditionalists to be those born between 1934-1945. Although present, Traditionalists represent only 3.7% of today's workforce (Fry, 2015). Traditionalists have been described as "practical; patient, loyal, and hardworking; respectful of authority; and rule followers" (Sessa et al., 2007, p. 50). Hernaus and Vokic echo this description, using the traits "conformist…committed, consistent, realistic… strong set of moral obligations" (2014, p. 618). The Great Depression affected traditionalists, who are known for their thrift. It is possible some fought in WWII or witnessed the bombings of Hiroshima and Nagasaki, while others listened to Roosevelt's Fireside Chats.

These life events shaped the way Traditionalists view workplace communication and behavior. As a result of these events, workplace traits of the Silent Generation include a focus on duty before pleasure, loyalty to company/employer, patriotism, conformity, conservatism, and a strong respect for authority (Hernaus & Vokic, 2014; West midland Family Center, n.d.).

Baby Boomers. Baby Boomers were born during the prosperous period following the end of WWII, specifically, between 1946 and 1964 (Smola & Sutton, 2002). The Traditionalist

parents of Baby Boomers raised this generation to be independent idealists. Boomers witness the social upheaval of the 50's, 60's and 70's, and may have participated in the Women's Movement or Civil Rights Movement. Boomers have a strong interest in team harmony and a tendency to reject the assumption that the status quo is always correct.

In their work Boomers are process-oriented and find identity in their employment; additionally, they are team players who value the status symbols their hard work earns (Hernaus & Vokic, 2014). When this status is achieved, Boomers are loyal to employers, but may still harbor antiestablishment attitudes. They are more likely to multi-task, challenge authority, and seek decisions by consensus, rather than authority (West Midland Family Center, n.d.). Meyers and Sadaghiani note that intergenerational communication in the workplace became a hotly debated issue when Boomers settled down and entered a workforce that was previously inhabited by rule-abiding Traditionalists (2010).

Generation X. Generation X employees were born between 1965-1977 (Smola & Sutton, 2002). Hernaus and Vokic describe members of Generation X as "individualistic, pragmatic, cautious, cynical, skeptical, informal, independent, self-reliant, flexible" (2007, p. 618). Gen-Xers were born into a rapidly changing world where one's parents were as likely to be divorced as married, downsizing was everyone's fear, and technology changed more quickly than Madonna's hair. Generation X-ers are also the first generational cohort to experience a decrease in financial stability from the relatively stable incomes of their parents to the volatile job market where downsizing was on everyone's mind. The self-reliance and skepticism of GenX impacted their work relationships with their Baby Boomer bosses and co-workers. Unlike Baby Boomers, Generation X did not display the same loyalty to institutions. Instead, Generation Xers are loyal to managers or direct supervisors, not companies. Their cynicism toward institutions resulted in a

high level of self-reliance and a preference for working independently (West Midland Family Center, n.d.). It is not surprising that some of the most popular literature on generational differences arose during the late 1980's and early 1990's (Howe & Strauss, 1991, 1993, 1997, 2000). It seems that because this issue is still a pressing one in today's workplaces, Baby Boomers never learned to communicate with Gen-Xers, and these two generations are at a loss when it comes to communicating with younger generations (if popular press exclamations are to be believed).

Millennials. Millennials, or Generation Y, are those born between 1978-1995 (Smola & Sutton, 2002). However, as we will later see, others define Millennials as those born from 1980 onward (Cennamo & Gardner, 2008; Hernaus & Vokic, 2014). This generation is described with a host of both positive and negative attributes. These workers are "optimistic, ambitious, confident, moral, civic-minded, idealistic, have global and diversity consciousness, and close family ties" (Hernaus & Vokic, 2014, p. 619). Millennials struggle with workplace conflict, are informal, and use too much slang (Ogbeide, Fenich, Scott-Halsell, & Kesterson, 2013). They are also indolent, self-involved, and fickle (Meyers & Sadaghiani, 2010). However, research has been done (with mixed results) to determine if Millennials are truly disloyal and lazy, or if there are other factors at play.

A primary trait of Millennials is their affinity for technology. Given smart phones before reaching adulthood, conducting most research using internet sources, and completing many tasks online that previously required pen and paper, millennials grew up with more information at their fingertips than any other generation. However, this increased access to information has led to disorganization, a penchant for ineffectively multi-tasking, and risk-averse decision making processes (Twenge, 2009). Millennials' influence on the way information is communicated at

work cannot be underestimated because disseminating information in an organization is still a subject of concern separate from age.

Pew Research found that in 2015, Millennials surpassed Baby Boomers as the most prevalent age group in the workforce, due in part to the large influx of millennial-aged immigrants to the United States (Fry, 2015). While at first glance it may seem that Millennials' increased presence bodes well for workplace communication, this is not necessarily the case. Longer life spans, a poor economic environment, and changing views of retirement will keep Baby Boomers in the workforce long after retirement age (Smith & Galbraith, 2012). This means the "generation problem" is not going to go away as one generation ages out of the workforce; considerations for addressing this phenomenon are ongoing and unlikely to end any time soon.

Millennials vs. Net Generation Debate

Discrepancies exist in labelling the beginning and end dates of generations. Particularly, there is debate regarding the Net Generation. Are members of this group simply the youngest Millennials, or, has technology moved so quickly that the Net Generation is wired differently than their Millennial peers? This distinction is important because if the Net Generation is distinct from the Millennial Generation, this suggests that social factors (some would say technological advances) led to this shift. The following discussion considers the extant literature on Millennials and identifies gaps that will be addressed in this dissertation.

Millennial and/or Net Generation aged employees face hurdles not only because of their unique learning preferences, but in their workplace expectations regarding membership negotiation and workplace interactions. Three traits that differentiate millennials from Boomers and GenX-ers were identified by Myers and Sadaghiani (2010). First, Millennials expect rapid feedback from supervisors. Second, Millennials expect open communication from and between

management. Third, team-based projects are preferred because Millennials are risk-averse. These traits differentiate Millennials from their older coworkers. Boomer and GenX employees expect feedback when there is a problem or when new information arises, and do not expect to be close to their bosses. Open communication is viewed with suspicion among older employees who believe information should be shared on a need-to-know basis. Additionally, unlike the Net Generation, older employees value delegating tasks after employees have "paid their dues," rather than creating teams to solve problems.

Popular literature suggests that Millennials have strong abilities when it comes to communication and information technologies (CITs) and CMC in general. However, familiarity with CMC in school and social contexts has not been empirically proven to translate to workplace CIT use (Consoli, 2006). Employees are likely to try to decrease uncertainty about the technology by mirroring leader users (Gorman, 2004) when new technologies are introduced to the workplace. (Gorman, 2004). Myers and Sadaghiani (2010) suggest that younger employees could become "resident experts concerning CITs" (p. 232). Further, acting as leader-users of technologies may open this generation's eyes to the limitations of workplace technology, as they identify a loss of immediacy and intimacy in CITs (Daft & Lengel, 1984, 1986).

Millennials' technical savvy and differing values toward workplace communication make this group especially salient to study. Adding to that the confusion about the Net Generation as a Millennial subset versus entire new generation, and this study becomes relevant in terms of differentiating communication characteristics and differentiating demographic shifts. There are two major areas of confusion to which this dissertation will contribute. First, the dissertation will identify the workplace communication characteristics of the Millennial/Net Generation using empirical data. Much research has been focused on "managing" the generational cohorts in the

workplace. Second, due to perceived differences, popular press and trade journals recommend that management alter existing communication norms and practices to this group. Focusing on adapting to Millennial communication styles while simultaneously socializing Millennials into the workplace contributes to this confusion. Millennials have grown up in a culture saturated with technology. This, some suggest, has led to work expectations, from feedback to formality, that vary wildly from their older colleagues. Adapting to Millennial practices and preferences may not be sound advice for managers or organizations. Rather, they need empirical data to make informed decisions about the changes that are needed in training, socialization, and workplace communication.

Communication Channels

Methods of delivering information are known as channels. Literature suggests that the development and increased use of the internet have had the biggest effect on communicating with technology (Brock, Kai-Uwe, & Zhou, 2005; de Vries, van den Hoof, & de Ridder, 2006; Goman, 2004). Selecting the most appropriate channel to deliver a message has been identified as a key factor in communication effectiveness, but these choices are often constrained by "technology, customer and workforce characteristics, diversity and expectations and globalization of labor and customer markets, economies and information" (Axely, 2000, p. 18). Technology is changing more quickly than organizations can keep up. Communication that was previously limited to a top-down structure is now more open and collaborative as a result of the internet, employee intranet, and a host of other technologies (Brock & Zhou, 2005).

Communication Channel Theories

In 2015, Millennials, individuals born between 1980 and 2000 (Smola & Sutton, 2010), surpassed Baby Boomers to become the largest generational cohort in the North American

workplace (Pew Research Center, 2015). Millennials are also called the Net Generation as a result of their perceived familiarity with technology and the Internet. However, this name is more often applied to a subset of this cohort, namely those who are currently between 17 and 24 years of age. For clarity, this is the age group that the study refers to when discussing the implications.

Corresponding with this demographic shift are rapid changes in the technology used to facilitate communication at work. Computer mediated communication (CMC) and information technologies (IT) are increasingly used to deliver many types of workplace information. Face-to-face (FtF) and CMC are used in maintenance related communication (communication that fosters and maintains interpersonal relationships at work), task-related communication (communication about the assigning, process, or result of completing tasks), and innovation- related communication (communication that generates new ideas or future plans). Some CMC channels are more appropriate than others, depending on the type of information being shared (Cowell, 2010).

Understanding the most appropriate channel for a particular type of communication is of paramount concern for managers (Walther & Parks, 2002). Additionally, employees of different ages vary in their perceptions of salience across different CMC and FtF interactions. Popular presses claim that the Net Generation has a different understanding of technology than do their older colleagues; however, it has been difficult to empirically demonstrate that this gap is a result of age and not other variables related to familiarity and competency with technology. The following section will detail three theories used to explain the relationships between workplace communication and channel preferences for different types of information. Social presence theory (SPT), media richness theory (MRT), and channel expansion theory (CET) contain constructs important for consideration in relation to the changing demographics of the

workforce. This section provides a critique of these theories as well as implications for the use of these theories to guide the present study.

Social Presence Theory. SPT attempts to explain the relationships between nonverbal communication, use and perceived utility of CMC, and social presence. Co-presence, defined as the perception that interactants in a communication exchange are present with one another (Schroeder, 2002), is an important concept for the selection of CMC versus FtF communication in the workplace. With CMC there is a loss of nonverbal cues between interactants. These nonverbal cues include gestures, olfactory processes, distance and space, touch, and eye contact. Nonverbal cues aid in the interpretation of messages and the ability to construct an appropriate response to a message (Burgoon, Buller, & Woodall, 1989). However, incongruence between a message and the nonverbal factors surrounding the message can lead to confusion, miscommunication, dislike, and discomfort (DePaulo, 1992; DePaulo & Friedman, 1988; Mehrabian & Wiener, 1967).

It makes sense then, that CMC which can transmit more verbal cues, and lead to increased perceptions of co-presence between interactants, will result in positive socio-emotional responses to the message and messenger (Bente, Ruggenberg, Kramer, & Eschenberg, 2008; Lombard & Ditton, 1997; Walther & Carr, 2010). For management seeking to deliver critical training information, for example, positive socio-emotional responses to the information will increase individuals' affinity with the organization.

CMC which incorporates more audio or visual cues of co-presence also produce more rapid feedback. Perceptions of immediacy, or how quickly feedback can occur, also increase co-presence. This desired result prompts managers to choose the communication channel which, within the time, spatial, and structural constraints of the organization, will provide the desired

response from interactants. To understand this, Rice and Case (1983) tested the perceptions of social presence among university employees using a program called "Terminals for Managers." Terminals for Managers connected employees in different roles via electronic messaging software and a shared database of relevant documents. Following the implementation of the system, the authors surveyed users to find the relationship between relational salience, likelihood of adopting the technology, and attitudes toward the use of the technology. They found positive relationships between perceptions of relational salience (co-presence) and attitudes toward the use of Terminals for Managers.

Nowak and Biocca (2003) studied perceptions of social presence across mediums in a quasi-experimental study. Using a virtual job networking program call "Cool Modes," the authors created job profiles for six hypothetical job applicants. The profiles came in five formats: text, audio, audio/video, low resolution avatar, or high resolution avatar. Participants were placed in one of the five conditions and asked to review the applicants' profiles. While also concerned with the effects of anthropomorphism (avatars as representatives for the applicants), participants were surveyed about their perceptions of the applicants' immediacy, ability to communicate intimately, and attitudes toward the technology used.

The authors found a significant difference between the text-based profiles and the other four types of profiles (audio, audio/video, low resolution avatar, high resolution avatar). There was no comparison to FtF communication in this study. It focused on the richness or leanness of various CMC in these channels' ability to convey co-presence. However, and most importantly, they did not find significant changes in perceptions of co-presence or immediacy between the other four conditions. This is incredibly important because discussions of media richness theory (discussed later in this response) hinge on the assumption that richness falls on a spectrum from

"lean" to "rich," with CMC that provides the most immediate non-verbal feedback being the richest (after face-to-face). Nowak and Biocca's (2003) study contradicts this finding, but does not consider a variety of other important factors, namely, familiarity with the technologies used and unique organizational settings.

As managers attempt to navigate changing technologies in the workplace, employees with varying degrees of input and power must also adopt new technologies. The Net Generation grew up with technology at its fingertips, in a way no other generation has. This suggests that conceptions of co-presence and immediacy, developed before cell phones and teleconferencing, may need to be revisited.

Media Richness Theory. MRT is a criticized but frequently employed theory for assessing relational salience across communication channels. According to MRT symbolic and relational messages are best shared via FtF communication, while process oriented communication can be shared across less "rich" media like memos (Daft & Lengel, 1986). MRT posits that managers can and should tailor their media choice to the message and task at hand. Figure 1 (on the following page) describes the initial media richness hierarchy described by Daft and Lengel (1986).

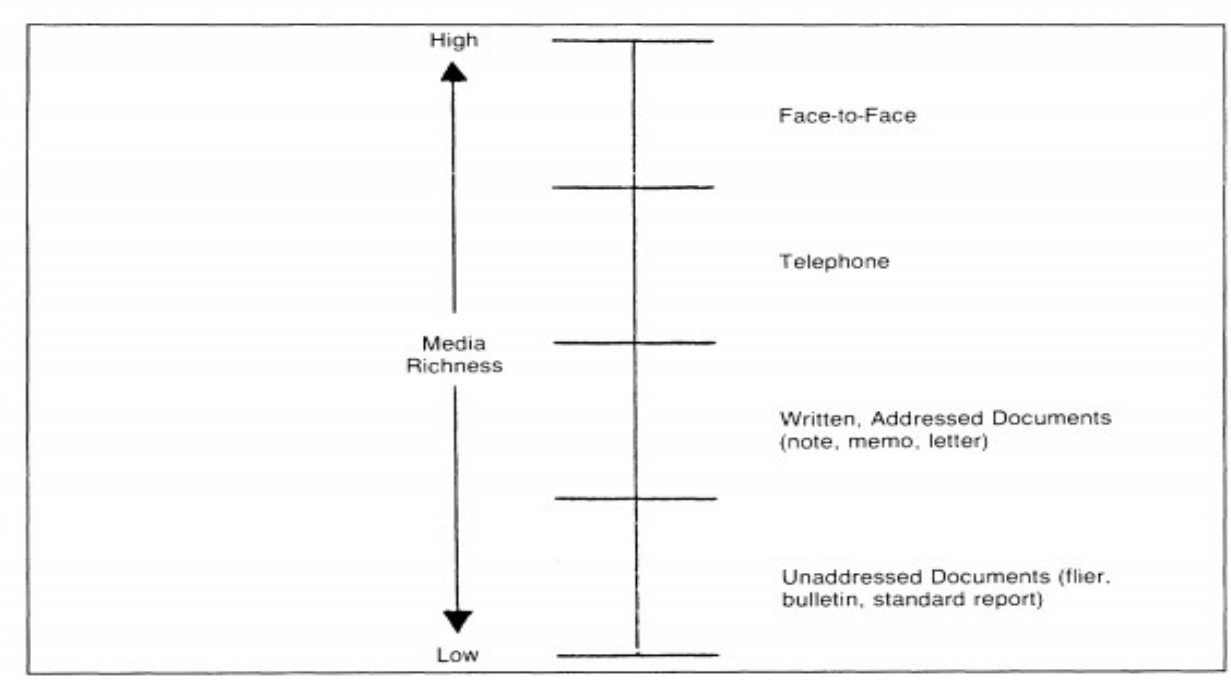

Figure 1. Initial Hierarchy of Media Richness

Later studies attempted to place instant messaging into this hierarchy (Suh, 1998). Rich media transmit messages with varying degrees of information richness, or, how well a medium can transmit a message to change one's understanding, within a constrained time (Walther & Carr, 2010). Selecting the appropriate medium allows managers to decrease equivocality and promote a productive workplace with less conflict (Lengel & Daft, 1989). There are four dimensions of media richness: number of nonverbal cues, naturalness of language (i.e. formal business memos versus informal conversation), immediacy of feedback, and personalization of the message. A CMC that incorporates more nonverbal cues, allows the interactants to understand and respond quickly, uses natural sounding language, and is directed to the receiver of the message will be viewed as more rich than a message that does not contain all four components (i.e. a formal, unaddressed, memo).

Daft, Lengel, and Trevino (1987) argue there are seven organizational processes that provide organizational structure through communication, be it CMC or FtF. The processes and CMC implications are listed below:

a. Group meetings: Groups, departments, and teams are organizational components that serve to complete tasks and structure relationships. Due to CMC innovations, groups and teams can work FtF or virtually using communication technologies, storage technologies, and transformational technologies (Leonardi & Bailey, 2008).

b. Bridges/liaisons: These individuals serve to connect different parts of an organization. Rather than relying on physical meetings or other FtF communication, bridges can electronically manage relationships between departments and teams.

c. Direct contact: Direct contact between employees allows problems to be solved more quickly due to the immediacy of feedback. Immediacy of feedback for problem solving is a goal of CMC (Walther & Parks, 2002).

d. Planning: Planning, a type of task related communication, can now take place virtually, via project management software like Slack, Collab, or Google apps. Electronic calendaring also aids in the coordination of schedules, and makes schedules and employee whereabouts potentially available to others.

e. Special reports: Reports made in response to a specific problem are more easily disseminated across organizations. However, due to mergers, acquisitions, and other organizational changes, institutional memory is short, so these documents must be preserved.

f. Rules and regulations: Once found in the handbook or a file in human resources, company intranets and e-handbooks can now be accessed electronically, making problem solving quicker.

g. Information Systems: Scheduled generation and storage of information provides structure to organizations. Budgets, annual reviews, and other regularly recorded information can be stored and transferred.

The above structuring practices are derived from Daft (1983), and Daft and Weick (1984). Concerned with equivocality of messages, Daft and Weick attempted to identify structures and persons who served to decrease equivocality in organizational settings. Selecting the most effective communication channel to decrease equivocality should be a consideration of management. Decreasing equivocality when communicating with the Net Generation is important. Younger employees were entering the workforce, or were preparing to enter the workforce, during the recession. In addition to economic uncertainty, terrorism is a prominent concern, as is workplace safety and privacy. Given the equivocal messages the Net Generation received during these important years, it is reasonable to assume that the need to reduce equivocality is an important workplace feature for this cohort.

Criticisms of SPT and MRT. While frequently used, SPT and MRT are not without their criticisms. First, both hold a somewhat deterministic view of technology. In both SPT and MRT, the salience or richness of the medium is fixed. The theories do not consider important factors in the use and adoption of technology, such as social (organizational) setting, individual attitudes related to a particular medium, or the relationship of interactants. Attitudes toward the adoption and use of technology are informed by a variety of individual, group, organizational, and environmental factors (Pinch & Bijker, 1987). These interactions cannot be studied in a

vacuum. While both theories recommend managers tailor their message and select an appropriate medium, framing CMC options from "rich" to "lean" might also unnecessarily privilege one technology over another, equally "rich," option.

Additionally, technological change has occurred more rapidly in the last 20 years than at any other time in history. Technology is more accessible, more learnable, and more adaptable than ever before. The suppositions of SPT and MRT cannot keep up with the rapid change in technology. Continually adding new software to the hierarchical model of MRT, for example, would be increasingly complex because of the over-saturation of software that serve similar or the same communicative purpose. While a multitude of options exist for workplace CMC, there is still sufficient variation that MRT could categorize these choices, but the linear manner in which MRT attempts to arrange FtF and CMC may be too complicated to advance theory.

Channel Expansion Theory. To remedy some of the limitations of a hierarchical, deterministic approach like MRT, Carlson and Zmud (1999) theorized a model of the relationship between FtF and CMC which incorporates users' experiences with a medium. CET measures self-reported familiarity with technology, social distance between communicators, and incorporates social identity theory (Tajfel, 1979) by asking participants about their perceptions of significant others' (colleagues, managers) views of technology. CET hypothesizes that individual familiarity and sociocultural factors predict an individual's perception of media richness.

Carlson and Zmud (1999) initially studied email use to test their theory. By surveying employees of a university (faculty, staff, and administrative), about their perceptions of email use, three important findings were uncovered. First, individuals who reported strong familiarity and competence with email were more likely than others to consider email to have more of the dimensions of richness. Second, controlling for age and sex, there was no significant difference

between faculty, staff, or administrators in terms of richness perceptions. Third, participants whose immediate supervisor and departmental colleagues favored email tended to view email with similar levels of richness (supporting tenets of social identity theory which state that significant others in our groups have an influence on our own attitudes toward artifacts).

To build upon Carlson and Zmud's email study, D'Urso and Rains (2008) attempted to expand the scope of CET by comparing FtF, email, and instant messaging. In their survey, they introduced a manipulation to induce variance in responses. Participants received two different sets of instructions. One group was told to imagine an interaction with someone they knew well. A second group was told to imagine the interaction was occurring with someone they did not know well. Findings supported earlier data from Carlson and Zmud (1999). The expanded study confirmed that one's previous relationship to her/his communication partner influenced perceived richness of the media. Those who were asked to imagine they were interacting with someone they knew well had higher levels of perceived richness. The study additionally confirmed that familiarity with a technology increased perceived richness, as did the perception that one's colleagues and managers used and valued the technology.

Criticisms of CET. While CET addresses some of the limitations of MRT, it is also not without criticisms. First, empirical data about technologies that incorporate audio/video is not yet available. Telephone and video is increasingly used not only for communication between colleagues, but in the hiring and training processes as well. Future studies should include categories for audio and video, which transmit additional nonverbal cues that increase relational salience and co-presence.

Second, relying too heavily on self-reported measures of familiarity is a drawback. Those with high familiarity with a CMC may fall into patterns of behavior due to that familiarity. These

patterns of behavior might not be positive because individuals may not use all of their knowledge bases to address a new situation or person; they may simply do what has been done before. This unfortunate behavior choice affects interactants perceptions of richness (Timmerman & Madhavapeddi, 2008).

Third, individuals in the workplace rarely get to design their own technology, nor are many able to do this. Technology is provided by the employer and users (employees) comply. Sometimes the technology provided by employers, simply through its design and features, cannot increase in richness. Even with training and familiarity, some CMC is limited in the number and variability of cues it can provide (D'urso & Rains, 2008). And fourth, it is difficult to measure an expansion in the richness of a technology without more thoroughly understanding a user's history. This is complicated by study designs that focus on self-reports of familiarity and/or skill level.

Implications for the use of MRT, SPT, and CET to study the Net Generation

Studies of media use by the Net Generation are important for three main reasons. First, organizations spend millions of dollars a year to hire and train new employees (Hynes, 2016). The Net Generation is entering or will enter the workplace in the next three years. Understanding if these new employees, who will eventually outnumber their slightly older Millennial counterparts (New York Times, 2015), have different views of channel preferences for different types of information will be valuable for management. Identifying what training is required, versus what could be forgone, could help the bottom line of organizations. If it is, in fact, familiarity with CMC and social distance between communicators that predicts richness and media choice, organizations may be able to stop "managing the generations" and start targeting their training efforts.

Second, the argument that familiarity breeds complacency (or, poor email etiquette) should be further explored with this group in particular. Popular press enjoys characterizing younger employees as tech-savvy but unable to function without their technology. If poor habits have been developed, this too could be addressed in training. Additionally, a study of these theories in relation to this generational cohort will lead to a greater understanding of the relationship between technology used for socializing and what, if any, transfer exists between workplace technologies (which are decidedly more formal). It has been demonstrated that individuals present themselves differently online versus in person (D'Andrea & Walther, 2011), but self-presentation (as a communication skill) in workplace versus social communication has not been as thoroughly explored.

Third, organizations are changing rapidly in terms of communication (Scott, 2009). The economic and social uncertainty described earlier has not completely faded. Four generations working together in a time of high uncertainty makes this study both timely and relevant. Changes in CMC are occurring, but also changes in the structure of organizations, the nature of interpersonal relationships at work, and workplace demographics (Pew Research Center, 2016). A more diverse workforce (in terms of age and race/ethnicity) is emerging, as well as the ongoing process of mergers, acquisitions, and corporate failures. Given the hypothesized effect of the Net Generation on workplace communication, it is critical that managers understand this generation's relationship to technology.

In summary, the merits of employing a media-focused theory to understand the Net Generation's understandings of richness and salience will outweigh the limitations of these theories. After reviewing SPT, MRT, CET, their limitations and strengths, this section described the implications of determining the Net Generation's understanding of salience across different

CMC. Further, CET has been strongly supported in earlier studies, but it has not been expanded to consider newer CMC options. This study will lead to increased theorizing about the nature of channel expansion, and the nature of individuals' relationships to CMC. The convergence of new CMC and a new generation in the workplace warrant further study. Cowell (2010) found that information type was a more salient richness factor than age when communicating at work. This research will expand on Cowell's findings and provide higher education and industry with a better understanding of this complicated and interesting cohort.

This information will be valuable across organizational contexts. In certain mediated situations, such as CMC, people may not have a long-term organizational memory of how to convey/interpret contextual cues embedded in text. There is a greater potential for message misunderstanding and conflict because workers can no longer rely on long-term organizational knowledge of personal styles, previous experiences and established social norms of interaction with those they communicate with – their coworkers, external suppliers, shareholders, cross functional teams, etc.

Hypotheses

Given the previously discussed variable relationships, the following hypotheses are proposed:

Hypothesis 1 was developed to reflect the first objective of this study: *determine how the Net Generation understands and selects communication from management across channels.*

Hypothesis 1: Information type will affect channel preference among the Net Generation.

Hypotheses 2-5 were developed to address the second objective: *determine how the Net Generation understands productive/counter-productive communication from management.* These hypotheses explore not only the relationship between productivity and information type, but also

the relationship of increasing of morale and trust and the decreasing of stress when information is disseminated through the most effective channel (morale, trust, and stress are components of productive/counter-productive communication).

Hypothesis 2: Productive information received from management through particular channel types will increase productivity levels in the Net Generation.

Hypothesis 3: Productive information received from management through particular channel types will increase morale in the Net Generations.

Hypothesis 4: Productive information received from management through particular channel types will increase trust in the Net Generation.

Hypothesis 5: Productive information received from management through particular channel types will decrease stress in the Net Generation.

The following hypotheses reflect the inverse of the above, and include updated language reflecting the change from "*unproductive*" to "*counterproductive*."

Hypothesis 6: Counterproductive information received from management through particular channels will decrease productivity in the Net Generation.

Hypothesis 7: Counterproductive information received from management through particular channels will decrease morale in the Net Generation.

Hypothesis 8: Counterproductive information received from management through particular channels will decrease trust in the Net Generation.

Hypothesis 9: Counterproductive information received from management through particular channels will increase stress in the Net Generation.

CHAPTER THREE

METHODOLOGY

Research Perspective

Organizational communication research has undergone several shifts, both in focus and in methodology, since the early 1900's. Originating with questions about communication effectives, the field later became concerned with the implications of organizational culture and explicating the experiences of minority voices within organizations (Deetz, 1992; Pacanowsky & Trujillo, 1982). The field is now robust with a variety of perspectives and research methodologies. Overarching perspectives in the conduct of communication research inform the conception, use, and implications of particular theories. These perspectives inform not only the methods one is likely to use, but also the kinds of questions one will ask.

A diagnostic approach to understanding organizational communication often requires a social scientific perspective, as well as an understanding of the criticisms of this approach. A social scientific approach has also been called post-positivist or functional. For the purposes of this methodology, the term social scientific approach will be used to denote a perspective which engages in the scientific method for the explanation of social phenomena. A discussion of epistemological implications will also be provided. Finally, the ways methodology will inform theory and data collection processes will be discussed.

The New Post-Positivism. Textbooks about communication theory tend to explain philosophical orientations as a spectrum ranging from social scientific/post-positivist/functionalist to interpretive to critical (Griffin, Ledbetter, & Sparks, 2015; May & Mumby, 2005). This linear way of looking at communication theory is undoubtedly an

oversimplification, but is it is a common way to organize a complicated but young field which draws on a variety of approaches. The section that follows will discuss the etic versus emic approach to research, the role of determinism versus free will, the research goals of objectivity versus emancipation, and the implications for viewing theory as a group of universal laws or as guidelines for the interpretation of texts.

An etic approach to research has been described as “top down” theorizing (Griffin, et al., 2015). This approach is guided by a priori theoretical knowledge and is common in social scientific approaches. In an etic approach, a phenomenon may be explored or tested using previously defined frames or categories. An example of this would be conducting an organizational communication audit using the International Communication Association (ICA) audit, or the Downs-Hazen communication satisfaction questionnaire (ComSat). Both of these (primarily) survey-based methods have been rigorously tested across a variety of organizations. If a researcher or consultant uses either of these measures, even with semantic adaptations specific to the organization under consideration, an etic approach is being used. The ICA audit and the ComSat provide pre-existing categories and assumed relationships in which researchers try to place organizations. This dissertation also stems from an etic approach, utilizing components of the ICA audit, as well as previously validated measures common in studies of CET.

An emic approach, on the other hand, attempts to begin research from the perspectives of the participants. By employing qualitative methods, a researcher engages relevant categories as they emerge in an ongoing interpretation process. In this approach, the researcher would ask participants to describe phenomena from their perspective, and attempt to categorize or explain how the participants interpret their surroundings. However, emic and etic approaches can inform

one another. For example, an emic interview process might reveal that employees are experiences dissatisfaction with superior/employee email interactions. After understanding the employees' experiences with dissatisfaction, a researcher, for purposes of helping the client understand how widespread the dissatisfaction was, might deploy a survey based on constructs revealed in the interview. Alternatively, if constructs tested by a survey do not yield the desired results, a researcher may choose to investigate this by interviewing employees and engaging in negative case analysis or reflection.

While an emic or etic approach informs how research is conducted, a researcher must also consider how she/he views participant behavior. A social scientific approach views behavior as largely deterministic (although, determinism has also been simplified into a spectrum from 'hard' determinism to 'soft' determinism). That is, behavior is influenced by environment or biology, and can be predicted or explained in cause and effect terms. This approach lends itself to a focus on the generalizability of research results to a larger population (i.e., this relationship was observed in this sample, and inferential tests suggest it did not happen by chance, therefore it likely occurs elsewhere). On the other hand, am interpretive free-will *purist* approach argues that individuals can act with free will in response to a communication interaction. A free-will purist would argue that an individual's reaction to a message, all things considered, is largely internal and a change to that reaction is a result of individual choices. Gradation exists between hardline scientific determinism and free-will purism.

Next, a researcher must understand the goals of their perspective and how those goals can be achieved through a particular theoretical lens. A social scientific researcher is concerned with emergent objectivity (differing from the pure objectivity proposed by Compte and Durkheim). An objective approach is characterized by careful attempts to exclude the researcher's biases

from the study at hand. This exclusion takes the form of experiments or surveys designed to increase variation in a sample, and by limiting researcher proximity to participants.

Finally, methodology informs the purpose and selection of theory. Once this is understood, one has to ask what a theory *should* do. From a social scientific perspective, a theory should provide a framework ('universal laws' in the classical positivistic sense) for understanding and predicting behaviors. Generalizability, falsifiability, and realism are trademarks of a valuable social scientific communication theory.

Understanding the underlying assumptions of a social scientific approach encourages an in-depth and productive discussion of the limitations of a particular study. The following section will more deeply describe the characteristics of a strong social scientific theory. Based on Corman's (2005) discussion of the new post-positivism, three traits that exemplify the growth and value of social scientific research will be discussed.

Epistemology and Social Scientific Research. Corman (2005) attempts to address the "straw man" positivist, a figure he argues has led to the great divide between social scientific and interpretive/humanist researchers. Identifying what constitutes knowledge, and the corresponding strengths and limitations of a knowledge generation process, explains the epistemological traits Corman identifies as traits of the "new" post-positivist paradigm: falsifiability and emergent objectivity. Differing from classical and logical positivism in several important respects, the social scientific approach taken in this dissertation is cognizant of its detractors and aware of potential pitfalls.

Falsifiability. Falsifiability is a standard for strong social scientific theory. Determining that a phenomenon did not occur by chance, but due to an isolatable predictor variable, provides valuable insight into cause and effect relationships within organizations. In order for a theory to

be testable, it must be falsifiable. There is little value in testing relationships that cannot be disproven. Scientific advancement occurs through a cycle of disproving previously held conceptions, and identifying the disconnect between actual and observable phenomena.

Corman and Scott (1994) attempted to understand the "bad to horrible" correlations between reported interactions in a communication network and actual, observable interactions. In a triangulated study comparing self-reports with coded observations, the authors concluded that errors in commission (where people reported interactions that had not been observed), those interactions tended to follow organizational structure. That is, people reported their perceived network versus their observable network. This demonstrates that the questionnaires being used measured perception, rather than observable reality. This conundrum is valuable for exploration in and of itself, but is especially important for falsifiability as a standard of strong social scientific research.

Emergent objectivity. Corman (2005) further identifies emergent objectivity as a distinguishing trait of the new post-positivism. This is different from the "pure" objectivism advocated by classical and logical positivists of the past (Compte, Durkheim, Popper). Instead, this perspective embraces objectivity by consensus. Earlier positivisms were biased toward sensory perception and observation. This perpetuated the stance that there was a capital "T" Truth which could be accessed through systematic observation. The new post-positivism described by Corman embraces the replication of results as a gold standard of strong social scientific research. This objectivity is emergent because it acknowledges previous criticisms, but uses cautious empiricism to continue to refine instruments and methods.

Implications for the Dissertation. As a result of this research perspective, there are several implications for this study. Media richness theory, social presence theory, and channel expansion theory attempt, through various means, to determine which communication channels are most appropriate for different types of communication in organizations. Predicting the successful merger of channel and message type is a diagnostic goal of this theory. This study will identify the relationships between channel selection, channel familiarity, and age, with a particular focus on the Net Generation cohort. This deterministic approach, in tandem with emergent objectivity, will lead to confirmatory or disconfirmatory emergent evidence which supports (but does not prove) theoretical constructs.

Generations, Technology, and Social Construction. A final consideration for the relationship between a scientifically structured study and this dissertation is the incorporation of elements which have been argued to be socially constructed. Mannheim's (1952) conception of a generational cohort is informed by a social constructionist perspective. Mannheim argues that generational cohorts arise as a result of their shared *social location*. A generation is not simply identified by a span of birth years, but also by the experiences shared. These experiences can be wars, national triumphs and tragedies, or cultural shifts, just to name a few.

Of concern regarding this discussion of perspectives is this: how might the social construction of generations enhance or interfere with a social scientific perspective? Multiple sources have identified the binding experiences of this cohort: rapid technological change, acts of terrorism, and so-called "helicopter" parenting. However, while we can be sure that this cohort has shared similar experiences, we cannot be sure to what degree those experiences inform their workplace communication preferences. Maintaining a focus on emergent objectivity will ensure that false or taken-for-granted conclusions will not be reached.

CET asserts that views of technology are also somewhat socially constructed. Because of this assumption, CET questionnaires attempt to identify attitudes toward technology through a series of Likert-type attitudinal measures, mainly ranging from agreement to disagreement about certain technological traits. CET identifies social influence as an indicator of attitudes (i.e. my peers/coworkers/superiors/friends think technology is important). Additionally, technology use is regimented by the type of organization in which one works, and one is limited by general abilities and knowledge bases. These traits reflect an element of determinism where attitudes and preferences may come into play.

Methods

Participants and Sample. A convenience sample of students aged 18-27, enrolled in general education business communication or public speaking courses at a large, southeastern university participated in this study. To reiterate, the Net Generation is defined for this study as a subset of Millennials, who are currently aged 18-27. As part of the course requirements for communication studies courses, students participate in studies that are identified in a research pool, or they may opt to complete an alternative assignment in lieu of research participation. The research pool abides by all university Institutional Review Board requirements and procedures.

Data Collection and Analysis Procedures. The survey was administered using a link from Qualtrics. Qualtrics is a web-based survey tool used to create, store, and analyze survey data. The survey took roughly 35 minutes to complete.

Instrument. This study utilized a survey questionnaire designed by Cowell (2010). The instrument is comprised of a channel preference ranking and Likert-type scales designed to measure respondent understandings of specific types of information received from management through different communication channels. A demographic section follows. The ICA audit

(Goldhaber & Krivonos, 1976; Hargie & Tourish, 2000) formed the base for this study. There are eight dimensions covered in the audit:

1. Receiving information from others
2. Sending information to others
3. Follow-up on information sent
4. Sources of information
5. Timeliness of information received from key sources
6. Organizational communication relationships
7. Organizational outcomes
8. Channels of information

The types of communication channels listed in the ICA audit are provided below:

1. Face-to-face
2. Written memos, letters, and notices
3. Bulletin board
4. Corporate newsletter
5. Plant newspaper
6. Procedural manual
7. Home mailing
8. Pay envelope stuffer
9. Communication committee meeting minutes
10. Safety steering committee minutes
11. Shift briefings
12. Meeting with supervisor

13. Meeting with divisional management

14. Meeting with plant management

15. Departmental safety meeting

Absent from early versions of the ICA audit are meaningful advances in communication technologies. However, the following categories will be included in the survey instrument as a result of updates to the survey:

16. Electronic media (email, text, instant messaging)

17. Virtual media (teleconferencing, i-chat, video-conferencing, interactive DVD or CD)

Additional measures for productive and counterproductive communication were also identified using the process described in the next section.

Instrument Authenticity, Reliability, and Validity. Instrument development was based initially upon the Kupritz and Cowell qualitative study (study completed in 2009, but published in 2011) regarding worker understandings of online versus face-to-face information received from management. Respondent answers from the qualitative study were used to development survey items for the Cowell (2010) study. Cowell (2010) also conducted focus group interviews with workers to authenticate constructs in the survey instrument.

Items from the ICA audit have strong internal consistency, with Cronbach's alpha averaging .89 (Rubin et al., 2014). Items in the Cowell (2010) study that were derived from the ICA audit averaged a Cronbach's alpha of .95. Cowell (2010) determined the reliability of the instrument was strong, with items that did not load at +/- 0.40 dropped. To further establish construct validity, Cowell conducted an exploratory factor analysis (EFA), which revealed "reliabilities and correlations verified construct validity by establishing convergent validity

(items measuring each construct were highly correlated) and discriminant validity (items measuring separate constructs were not highly correlated)" (Cowell, 2010, p. 61).

After additional reviews of literature and discussion, "counterproductive" was identified as a possible substitution for "unproductive." Tipton (2015) conducted focus groups (*N*=19) with Net Generation students who were employed full time (80%) or part-time (20%). These focus groups were asked questions related to the concept of productive versus counter-productive communication from management, and it was determined that *counterproductive* was a stronger reflection of the denotative and connotative definitions of these types of communication from management.

CHAPTER FOUR

RESULTS

The following chapter entails the results of this study. First, demographic data of the sample are provided, followed by a breakdown of the reliability and validity of the tested constructs. Finally, results of hypothesis testing are provided. Using SPSS 24 (Statistical Package for the Social Sciences), results of exploratory factor analysis, repeated measures ANOVA, and linear regressions are provided.

Response Rate

The electronic survey was completed by 385 of 401 possible participants, resulting in a response rate of 96%. Fifteen participants completed the informed consent page, and did not proceed to the survey. One participant completed the survey, but spent only two minutes and 39 seconds doing so. Further investigation showed that this participant selected answers on the far-right side of the Likert scales for all questions, suggesting a faulty response. One participant answered all questions except the final question (type of employment) and was included in all analyses.

Demographic Statistics

At the beginning of the survey, participants were asked questions about their employment, while personal demographic questions were asked at the end. First, participants were asked about their employment status. Thirty-five point one percent of participants are currently employed either full or part-time; 39.8 are not currently employed full or part-time, but have been in the past; 1.8% hold an internship; 3.4% engage in volunteer (unpaid) work); and 19.9% do not work. Participants were then asked about their age. Of the 382 qualified participants, 100% met the criteria to be considered a member of the Net Generation (18-27

years of age). Three participants were excluded due to age. Participants were 62.6% female, 36.6% male, and .8% other. Racial backgrounds of the participants were 11% Black/African-American, 74.9% White/Caucasian, 1.0% Pacific Islander, 4.2% Asian/Asian American, 2.4 Hispanic, 3.4% Hispanic or Latino, 3.1% other.

Participants were asked about the kind of work they do. Six point three percent work in a professional/office setting; 5.2% in the non-profit sector; 5.5% in education; 13.4% in food service; 15.7% in retail; 2.2% in healthcare; 3.9% in marketing/communications; 3.9% in a family-owned business (where they are supervised by a family member); and 43.9% in other types of jobs. One participant did not answer this question, but answered all others. Tables for all demographic data can be found in Appendix C.

Missing Data

After the removal of the participants described under "response rate," all other participants completed the survey in its entirety. The three respondents who did not fall into the Net Generation age category were excluded from analysis as their number was too small for significant comparisons with the target group.

Data Distribution for Productivity/Counter-productivity

Data were assessed for normality by searching for outliers and assessing skewness and kurtosis. No outliers were found and skewness and kurtosis fall within acceptable ranges, +/- 2. Tables containing descriptive statistics, baseline reliability analyses (Cronbach's alpha), and exploratory factor analysis results can be found in Appendix D.

Reliability and Validity of Productive/Counter-productive Scales

Exploratory factor analysis was conducted to determine the underlying pattern of relationships among variables (latent factors of productivity across five channels and counter-

productivity across five channels with eight expected components for each factor). However, no causal inferences can be made from these correlations alone. EFA is appropriate as modifications were made to the Cowell 2010 instrument that replaced the construct "unproductive" with "counter-productive" (see the methodology section for a more detailed description of this process). Also, this generation has less work experience than previous cohorts and this could possibly result in different understandings of productive and counter-productive information across channels.

Cronbach's alpha was used as the initial baseline for reliability analysis. The eight items which contribute to an individual's ability to be productive at work relate to task completion, morale, and trust as a result of productive/counter-productive workplace communication across channels. There are differing suggested ranges for acceptable Cronbach's alpha, with most ranging from .70-.95 (Tavakol & Dennick, 2011). For productivity across channels, Cronbach's alpha ranges from .87-.92. SPSS was instructed to recommend the elimination of components which would increase the Cronbach's alpha, but the deletion of components was not necessary (i.e. deleting items would actually lower Cronbach's alpha).

Productive Communication across Channels

Scales for productivity were then evaluated using exploratory factor analysis (dimension reduction) with varimax rotation. Factor loadings explain the relative contribution a component makes to each factor. With a sample size of 300, factor loadings should be above .298 to be considered significant (Stevens, 2002). In this dissertation N= 382. The Kaiser-Meyer-Olkin (SMO) measure of sampling adequacy was applied to each channel to ensure the appropriateness of computing an EFA for that particular set of variables. A KMO measure between .80-1.0 is

considered strong (Field, 2013). The following section describes the dimension reduction for each productivity channel.

Face-to-face. For productivity via face-to-face, these items were determined to be appropriate for EFA based on the KMO measure of .87. All eight items loaded onto a single factor (productivity via face-to-face), explaining 57.7% of the variance, with with factor loadings ranging from .69 to .84. Inter-item correlations ranged from r= .33 to r= .77, with all correlations significant at the p< .001 level.

Telephone. For productivity via telephone, these items were determined to be appropriate for EFA based on the KMO measure of .87. All eight items loaded onto a single factor (productivity via telephone), explaining 55.2% of the variance, with with factor loadings ranging from .72 to .79. Inter-item correlations ranged from r= .34 to r= .69, with all correlations significant at the p< .001 level.

Written document. For productivity via written document, these items were determined to be appropriate for EFA based on the KMO measure of .86. All eight items first loaded onto one factor (productivity via written document), explaining 53.89% of the variance, with with factor loadings ranging from .67 to .79. Inter-item correlations ranged from r= .26 to r= .73, with all correlations significant at the p< .001 level. Three items loaded onto an additional factor (non-task components of written document productivity), with loadings ranging from .21 to .62, and explaining 39.57% of the variance.

Electronic. For productivity via electronic communication, these items were determined to be appropriate for EFA based on the KMO measure of .87. All eight items first loaded onto one factor (productivity via electronic communication), explaining 58.47% of the variance, with with factor loadings ranging from .72 to .82. Inter-item correlations ranged from r= .37 to r=

.66, with all correlations significant at the $p < .001$ level. Three items loaded onto an additional factor (non-task components of electronic productivity), with loadings ranging from .21 to .62, and explaining 40.06% of the variance in this factor.

Virtual. For productivity via virtual communication, these items were determined to be appropriate for EFA based on the KMO measure of .88. All eight items loaded onto a single factor (productivity via virtual communication), explaining 63.4% of the variance, with with factor loadings ranging from .77 to .84. Inter-item correlations ranged from $r = .46$ to $r = .68$, with all correlations significant at the $p < .001$ level.

Overall productivity. A principle axis factor analysis was conducting on the 40 items (eight items for each channel: face-to-face, telephone, virtual, written document, and electronic) with varimax rotation. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO= .89. Correlation coefficients ranged from $r = -.013$ to $r = .73$. Factor loadings at +/- .298 were retained, resulting in eight rotated factors, with little communality between the eight extracted components (which explained 27.95% of the variance in overall productivity) and the other 32 components (all of which had eigenvalues less than Kaiser's criterion of 1.0). This suggests that the components which explain productive communication via face-to-face, telephone, virtual, written document, and electronic communication, may be distinct. Instead of a comprehensive model explaining overall productivity, with each channel measured in the same manner, this suggests that participants may understand each channel differently.

Counter-productive Communication across Channels

The above procedures were repeated for the construct of counter-productivity. Similar to the productivity measures, SPSS did not recommend the deletion of any items to increase Cronbach's alpha. Scales for counter-productivity were then evaluated using exploratory factor

analysis (dimension reduction) with varimax rotation. The same methods for determining the retention of factors were used for the productivity and counter-productivity measures. To reiterate, factor loadings above .298 were considered significant, and KMO scores between .80 and 1.0 were considered the threshold for sampling adequacy. The following section describes the dimension reduction for each counter-productivity channel.

Face-to-face. For counter-productivity via face-to-face, these items were determined to be appropriate for EFA based on the KMO measure of .91. All eight items loaded onto a single factor (counter-productivity via face-to-face), explaining 72.7% of the variance, with with factor loadings ranging from .79 to .89. Inter-item correlations ranged from $r = .55$ to $r = .83$, with all correlations significant at the $p < .001$ level.

Telephone. For counter-productivity via telephone, these items were determined to be appropriate for EFA based on the KMO measure of .91. All eight items loaded onto a single factor (counter-productivity via telephone), explaining 68.5% of the variance, with with factor loadings ranging from .78 to .86. Inter-item correlations ranged from $r = .52$ to $r = .78$, with all correlations significant at the $p < .001$ level.

Written document. For counter-productivity via written document, these items were determined to be appropriate for EFA based on the KMO measure of .90. All eight items first loaded onto one factor (counter-productivity via written document), explaining 67.02% of the variance, with with factor loadings ranging from .79 to .86. Inter-item correlations ranged from $r = .53$ to $r = .78$, with all correlations significant at the $p < .001$ level.

Electronic. For counter-productivity via electronic communication, these items were determined to be appropriate for EFA based on the KMO measure of .89. All eight items first loaded onto one factor (counter-productivity via electronic communication), explaining 66.19%

of the variance, with with factor loadings ranging from .76 to .85. Inter-item correlations ranged from $r = .43$ to $r = .79$, with all correlations significant at the $p < .001$ level.

Virtual. For counter-productivity via virtual communication, these items were determined to be appropriate for EFA based on the KMO measure of .91. All eight items loaded onto a single factor (counter-productivity via virtual communication), explaining 71.12% of the variance, with with factor loadings ranging from .81 to .86. Inter-item correlations ranged from $r = .53$ to $r = .78$, with all correlations significant at the $p < .001$ level.

Overall counter-productivity. A principle axis factor analysis was conducting on the 40 items (eight items for each channel: face-to-face, telephone, virtual, written document, and electronic) with varimax rotation. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO= .95. Correlation coefficients ranged from $r = .26$ to $r = .83$. Factor loadings at +/- .298 were retained, resulting in six rotated factors, with 47.7% of variance explained by the six factors (all of which had eigenvalues greater than Kaiser's criterion of 1.0). Similar to the results of the productivity EFA, the components for each factor varied greatly from the components of other factors. This further suggests that counter-productivity across channels may be understood as a function of the channel and/or users' familiarity with the channel, rather than a general understanding of counter-productivity.

Hypothesis Testing

Hypothesis 1 was operationalized to reflect objective 1 of this study: *to determine how the Net Generation understands and selects communication from management across channels.* Hypothesis 1 stated: Information type will affect channel preference for the Net Generation. Rather, Net Generation employees will select different channels for different kinds of information. To test this hypothesis, participants ranked communication channels from 5 (most preferred) to 1

(least preferred) across five different types of workplace communication received from management: private and confidential, routine and procedural, training, compensation and benefits, and time sensitive. First, the mean ranking for the most preferred channel was obtained. Tables detailing the mean ranks can be found in Appendix D.

Then, mean rankings and standard deviations for channels were obtained for each type of information: private and confidential, routine and procedural, training, compensation and benefits, and time sensitive. This is necessary to determine if any of the information types are viewed as a spectrum consistent with MRT hierarchies. The channels do not exhibit the hierarchical order described by MRT except for face-to-face. Tables displaying mean rankings for information type can be found in Appendix D.

Private and confidential information. For private and confidential information, face-to-face was the preferred channel, (M= 4.3, SD= 1.45). Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated, $\chi^2(9) = 102.1$, $p < .001$, and therefore, a Greenhouse-Geisser correction was used. A one-way repeated measures ANOVA with a Greenhouse-Geisser correction determined that there is an overall difference between the means, $F(3.51, 1345.7) = 121.6$, $p < 0.001$, with partial eta squared = .24. The null hypothesis of equal population means was rejected. The variance explained (indicated by partial eta squared) suggests that there are both statistically and practically significant inferences to be made about channel selection when dealing with face-to-face private and confidential information. This will be further discussed in the upcoming chapter.

Post hoc tests were used to determine which of the levels differed significantly. The Sidak correction revealed that, with one exception, each channel is significantly different from other channels at the $p< .001$ level when post-hoc pairwise comparisons are conducted. In the

case of private and confidential information, written documents and text-based electronic communication are not significantly different from one another. The multivariate test was significant, Pillai's trace= .49 and Wilk's lambda= .51.

Routine and procedural information. For routine and procedural information, participants preferred electronic communication (M= 3.43, SD= 1.32). Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated, $\chi^2(9) = 80.1$, $p < .001$, and therefore, a Greenhouse-Geisser correction was used. A one-way repeated measures ANOVA with a Greenhouse-Geisser correction determined there is an overall difference between the means, $F(3.6, 1373.8) = 32.1$, $p < 0.001$, with partial eta squared being .08. While statistically significant, this low effect size (Bakeman, 2005) suggests there may be little practical significance for distinguishing between channels for routine and procedural information. Post hoc tests were not computed because of the lack of practical significance.

Training information. Face-to-face (M= 4.1, SD= 1.42) was the preferred channel for receiving training information. Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated, $\chi^2(9) = 49.31$, $p < .001$, and therefore, a Greenhouse-Geisser correction was used. A one-way repeated measures ANOVA with a Greenhouse-Geisser correction determined there is an overall difference between the means, $F(3.8, 1445.8) = 76.4$, $p < 0.001$, with partial eta squared being .17. This larger effect size suggests there is also practical significance when delivering training information.

Post hoc tests were used to determine which of the levels differed significantly. The Sidak correction that most channels are significantly different from other channels at the $p< .05$ level when post-hoc pairwise comparisons are conducted. In the case of training information, face-to-face (most preferred channel) and telephone (least preferred channel) are significantly

different from written document, electronic, and virtual communication when it comes to training. The multivariate test was significant, Pillai's trace= .41, and Wilks lambda= .6.

Compensation and benefits information. Face to face (M= 3.61, SD= 1.47) was the preferred channel for receiving compensation and benefits information. Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated, $\chi^2(9) = 120.31$, $p < .001$, and therefore, a Greenhouse-Geisser correction was used. A one-way repeated measures ANOVA with a Greenhouse-Geisser correction determined there is an overall difference between the means, $F(3.46, 1316.7) = 76.4$, $p < 0.001$, with partial eta squared = .11. This low effect size suggests further study is needed to determine the practical significance, if any, of delivering compensation and benefits information face-to-face. Post hoc tests were not computed because of this effect size.

Time sensitive information. Face-to-face was also the preferred channel for receiving time sensitive information (M= 3.8, SD= 1.5). Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated, $\chi2(9) = 107.58$, $p < .01$, and therefore, a Greenhouse-Geisser correction was used. A one-way repeated measures ANOVA with a Greenhouse-Geisser correction determined there is an overall difference between the means, $F(3.48, 1326.3) = 66.96$, $p < 0.01$, with partial eta squared= .15. The null hypothesis of equal population means was rejected. Effect size measures suggest both statistical and practical significance for the delivery of time-sensitive information.

Post hoc tests were used to determine which of the levels differed significantly. The Sidak correction revealed that face-to-face (most preferred channel) is significantly different from all other channels at the $p< .05$ level when post-hoc pairwise comparisons are conducted. In the case of time sensitive information, telephone and electronic communication are significantly

from written documents and virtual communication. The multivariate test was significant, Pillai's trace= .36, and Wilks lambda= .64.

The results of five one-way repeated measures ANOVA's and the corresponding post-hoc comparisons yielded significant results. Within each condition, the highest ranked channel out of five channels was significantly different from at least three other channels. Thus, hypothesis 1, *information type will affect channel preference*, is supported.

Hypotheses 2-5 were constructed to reflect objective 2: determine how the Net Generation understands productive/counter-productive communication from management. Hypotheses 2 states that information received from management through particular channel types will increase productivity levels in the Net Generation. New variables were created to determine if the receipt of information from these channels increases productivity. To determine which channels were considered productive vs. counter-productive, productivity measures for each channel consisting of five Likert-type items ranking each channel from very counter-productive to very productive were computed into new variables. Frequency distributions for each variable were checked and those variables with more productive or very productive responses were renamed Rich(Channel Name). Channels which received more counter-productive or very counter-productive responses were renamed Lean(Channel Name). This resulted in the following variables: RichF2F, RichElectronic, LeanPhone, LeanWritten, and LeanVirtual. Interval-level productivity levels, therefore, are consistent with ordinal rankings (when treating Likert-type items as interval) such that face-to-face and electronic channels are the most productive and written document, telephone, and virtual channels are least productive.

Productivity levels for each channel were based on eight 5-point Likert-type questions (five questions relating to tasks and three questions relating to morale, stress, and trust).

Participants were asked to consider how the receipt of information from management across each of the five channels would increase or decrease productivity. The five questions relating to task productivity were computed into single variables, ProductivityF2F and ProductivityElectronic, while morale, stress, and trust were considered separately and are addressed in later hypotheses. This was repeated for each channel's productivity level.

Face-to-face and task productivity. Given the above information, two linear regressions were performed to assess productivity across productive channels (F2F and electronic). Face-to-face and electronic communication were the most preferred channels according to channel rankings, and were the channels with which participants have the most familiarity, according to usage reports. First, productivity level was regressed onto the F2F channel to determine if face-to-face communication increased productivity levels. Selecting F2F significantly predicted productivity, $\beta = .42$, $t(11.92)$, $p < .001$. Communicating F2F also produced a significant amount of the variance in productivity levels, $R^2 = .17$, $F(1, 380) = 81.4$, $p < .001$.

Electronic and task productivity. Second, productivity level was regressed onto the electronic channel to determine if electronic communication increased productivity levels. Selecting electronic communication significantly predicted productivity, $\beta = .46$, $t(10.1)$, $p < .001$. Selecting electronic communication explained a significant portion of the variability in productivity levels when receiving electronic communication, $R^2 = .21$, $F(1, 380) = 101.6$, $p < .001$. Thus, hypothesis two is supported. When the channel that is viewed as most productive is selected, productivity levels increase.

Face-to-face and morale. Hypothesis 3 states that information received from management through preferred channel types will increase morale among the Net Generations. Morale was regressed onto channel to determine if communicating via the face-to-face channel

would increase morale. Receiving information via face-to-face communication significantly predicted morale increases, β= .36, t(7.5), p< .001. Face-to-face communication also explained a significant portion of the variance in morale levels, R^2= .13, F(1, 380)= 56.62, p< .001.

Electronic and morale. Morale was regressed onto channel to determine if selecting electronic communication would increase morale. Receiving information electronically significantly predicted morale increases, β= .31, t(6.4), p< .001 and explained a significant portion of the variance in morale levels, R^2= .10, F(1, 380)= 40.33, p< .001. Hypothesis 3 is supported. Selecting the channel perceived as the richest/most productive will increase morale levels.

Face-to-face and trust. Hypothesis 4 states that information received from management through preferred channel types will increase trust among the Net Generation. Trust was regressed onto channel to determine if face-to-face communication increases trust. Communicating face-to-face significantly predicts trust, β= .41, t(8.9), p< .001, and explains a significant portion of the variance in trust levels, R^2= .17, F(1, 380)= 80.18, p< .001.

Electronic and trust. When trust is regressed onto electronic communication, electronic communication predicts trust, β= .35, t(7.4), p< .001 and explains a significant portion of the variance in trust levels, R^2= .13, F(1, 380)= 54.46, p< .001. Hypothesis 4 is supported. When channels viewed as most productive are used, trust increases.

Face-to-face and stress. Hypothesis 5 states that information received from management through preferred channel types will decrease stress among the Net Generation. Stress was regressed onto channel and the channel RichF2F significantly predicts stress, β= .24, t(4.87), p< .001 and explains a significant portion of the variance in stress levels, R^2= .10, F(1, 380)= 23.7, p< .001.

Electronic and stress. Stress was then regressed onto RichElectronic and the channel RichElectronic significantly predicts a decrease in stress, β= .28, *t*(5.65), *p*< .001 and explains a significant portion of the variance in stress levels, R^2= .10, *F*(1, 380)= 31.88, *p*< .001. Hypothesis 5 is supported. When the channels viewed as most productive are used, stress levels decrease.

Counter-productive Communication

The following hypotheses reflect the inverse of hypotheses 2-5, and include updated language reflecting the change from "unproductive" to "counterproductive." Hypothesis 6 states that information received from management through particular channels will decrease productivity. To test this hypothesis, productivity levels related to task completion were regressed onto the three leaner channels, written document, telephone, and virtual (i.e. leaner channels should correspond to counter-productive task completion). Because MRT hypothesizes that even equivocal, or counter-productive communication can be clarified or muddied by proper/improper channel selection, regressing counter-productive information onto the leaner channel types should lead to decreases in productivity, morale, and trust, and increases in stress.

Telephone and counter-productive task communication. Counter-productive telephone communication (for tasks) was regressed onto LeanTelephone and was not significant. Perceptions of productivity of telephone usage did not significantly predict task productivity, β= -. 04, *t*(- .76), *p*= .47. Telephone usage did not explain a significant portion of the variance in productivity levels, R^2= .002, *F*(1, 380)= .58, *p*= .45.

Written document and counter-productive task communication. Counter-productive written document communication (for tasks) was regressed onto LeanWritten and the result approached, but did not achieve significance. Where, β= .09, *t*(1.9), *p*= .06; written document

communication did not explain a significant portion of the variance in productivity levels where, R^2= .01, F(1, 380)= 3.68, p= .06.

Virtual and counter-productive task communication. Counter-productive virtual communication (for tasks) was regressed onto LeanVirtual and the result was not significant. Virtual channels did not predict productivity levels, β= -.04, t(-.68), p= .5, nor did they explain a significant portion of the variance in productivity levels, R^2= .001, F(1, 380)= .5, p= .5. Thus, hypothesis 6 is not supported. Selecting a channel viewed as leaner will not necessarily result in counter-productivity.

Morale and telephone. Hypothesis 7 states that information received from management through particular channels will decrease morale. Morale was regressed onto LeanTelephone and was insignificant. LeanTelephone did not significantly predict a decrease in morale, β= .02, t(.24), p= .65. LeanTelephone did not explain a significant portion of the variance in morale levels, R^2= .001, F(1, 380)= .2, p= .65.

Morale and written document. Morale was regressed onto LeanWritten and was insignificant. Written document usage did not predict a decrease in morale, β= .06, t(1.22), p= .22. LeanWritten did not explain a significant portion of the variance in morale levels, R^2= .004, F(1, 380)= 1.5, p= .22.

Morale and virtual. Morale was regressed onto LeanVirtual and was insignificant. Virtual channel usage did not decrease morale. Where, β= -.04, t(-.8), p= . 43; LeanVirtual also did not explain a significant portion of the variance in morale levels, R^2= .002, F(1, 380)= .64, p= .43. Hypothesis 7 is not supported. Communicating via leaner channels (less productive channels) does not lead to a corresponding decrease in morale.

Trust and telephone. Hypothesis 8 states that information received from management

through particular channels will decrease trust. Trust was regressed onto LeanTelephone and was insignificant. Usage of LeanTelephone did not significantly predict a decrease in trust, β=.07, *t*(1.3), *p*= .2. LeanTelephone also did not explain a significant portion of the variance in trust, R^2= .005, *F*(1, 380)= 1.77, *p*= .2.

Trust and written document. The above process was repeated for written document communication. Trust was regressed onto LeanWritten and was not significant. LeanWritten did not predict a decrease in trust, β= .07, *t*(1.4), *p*= .17. LeanWritten also did not explain a significant portion of the variation in trust levels, R^2= .01, *F*(1, 380)= 1.9, *p*= .17.

Trust and virtual. Trust was regressed onto LeanVirtual and was not significant. LeanVirtual did not predict a decrease in trust, β= -.003, *t*(-.05), *p*= .96. LeanVirtual also did not explain a significant portion of the variance in trust level R^2= .000, *F*(1, 380)= .003, *p*= .96. Hypothesis 8 is not supported. Selecting a channel viewed as leaner does not decrease trust.

Stress and telephone. Hypothesis 9 states that information received from management through particular channels will increase stress. Stress was regressed onto LeanTelephone and was not significant. Telephone usage did not predict stress, β= .002, *t*(.05), *p*= .96. It also did not explain a significant portion of the variance in stress levels, R^2= .000, *F*(1, 380)= .002, *p*= .96.

Stress and written document. Stress was regressed onto LeanWritten and a significant interaction was found. Using LeanWritten significantly predicts an increase in stress levels, β= .27, *t*(5.5), *p*< .001. Using LeanWritten also explains a significant portion of the variance in stress levels, R^2= .08, *F*(1, 380)= 30.79, *p*< .001.

Stress and virtual. Stress was regressed onto LeanVirtual and results were not significant. Virtual communication did not predict an increase in stress levels, β= -.04, *t*(-. 7), *p*= .5. It also did not explain a significant portion of the variance in stress levels, R^2= .001, *F*(1,

380)= .5, *p*= .5. Therefore, *in the case of written documents*, hypothesis 9 is supported, but it is not supported for the channels, telephone and virtual communication.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

As discussed in chapter three and reiterated in chapter four, instrumentation for this study draws on two main sources: the ICA audit, and productivity measures designed and validated in the qualitative and quantitative work of Kupritz (2005) and Kupritz and Cowell (2011). The ICA audit was selected as the foundation for several measures due to its high reliability and validity across organizational contexts and populations. The ICA audit measures used in this study obtained similarly high reliability coefficients (see Cronbach's alpha levels described in chapter four).

Additional measures related to productivity and counter-productivity were employed to relate to understandings of richness. Belief that a channel is richer in its ability to convey more cues should increase productivity, trust, and morale, and decrease stress. Five task-related items and individual items related to morale, stress, and trust were assessed. Tasks, morale, stress, and trust are dimensions of productivity outlined by Kupritz (2005). Cronbach's alphas for productivity measures ranged from .87-.92. These high coefficients and the previously discussed relationships between productivity and channel selection suggest that these measures are sound as well. Thus, the instrument as a whole appears sound with strong reliability and validity.

Information Type and Channel Selection

With the knowledge that the instrument is sound, a thorough discussion of the results of hypothesis testing is possible. Hypothesis one (information type will affect channel preference in the Net Generation) is reflective of objective one (determine how the Net Generation understands and selects communication from management across channels). To do this, participants were asked to rank order their most to least preferred channel for each of five

information types (private and confidential, routine and procedural, time sensitive, training, and compensation and benefits). In all information categories except routine and procedural (where there is no practical significance due to the low effect size), participants preferred face-to-face communication at a significantly higher rate than all other channels.

These findings support Cowell's (2010) assertion that there is common ground between the generational cohorts. While distinctions between generations have been identified (see detailed discussion in chapter three), commonly held beliefs about the Net Generation and technology are simply not based on evidence. Cowell (2010) had a smaller than desired sample of Millennial-aged participants, but those participants did not differ significantly from their older colleagues. Given the hype surrounding the Net Generation and technology, a reader could be forgiven for thinking the results of this study are about an older generation, as older generations are thought to prefer face-to-face communication more than younger workers (Cennamo & Gardner, 2008). However, the results of this dissertation study, when read in tandem with Cowell's earlier comparisons, paint a different picture. When it comes to communication from management, the Net Generation craves the uncertainty reducing presence of face-to-face message delivery.

While *Harvard Business Review* earlier promoted the idea that Millennials are different from older employees, recent stories in the vein of this dissertation have also concluded that generational differences are not as divisive as previously thought: "While pithy descriptions of what makes Millennials unique are presented as self-evident and seem to have a ring of truth to them, very few are supported with solid empirical research" (Pfau, 2016, para. 4). This dissertation supports the claim that the Net Generation is, in fact, not so different from older generations.

This desire is for face-to-face communication at work is actually stronger in the Net Generation than in older generations. Employers may be surprised by this non-distinction between their younger and older employees. However, there are important implications for management in these findings. Primarily, sources (industry and academic) that recommend tailoring communication to the Net Generation (see earlier discussion regarding the "managing of Millennials"). Because generations are actually more similar than different in workplace communication channel selection, attempting to tailor communication to the Net Generation by incorporating more technology may result in more, not less, equivocality, stress, and turnover.

Schwabel (2014) found similar results when asking Millennials and Net Generation-aged employees about their general preferences (comparing F2F and electronic); however, Schwabel's study did not delve into the varied information types discussed in this dissertation. Understanding how workers perceive different types of information conveyed to them can increase the effectiveness of organizational communication to support the company's bottom line. While previous literature has identified the importance of delivering private and confidential information face-to-face, this generation's preference for face-to-face training communication is a surprising development, as training dollars dedicated to online resources have increased in recent years (*2015 Training Industry Report*, 2015). Industry reports are consistent with Cowells's (2010) finding that older and younger employees prefer receiving face-to-face training. Cowell's study did not have any Net Generation-aged employees, but did contain older Millennials, Gen-Xers, Baby Boomers, and Traditionalists. Cowell's study, when compared to this dissertation, further strengthen the argument that for some types of workplace information, tailoring messages to younger employees (through increased technology usage) is a poor decision.

Particularly as it relates to training and knowledge transfer, understanding the largest generation's training needs is crucial for organizational success. *Training Industry Magazine* (2015) reported that organizations spend roughly $702.00 per learner, with 46% of training hours delivered face-to-face, 31.9% delivered using blended learning techniques, 26.4% delivered via computers, and 1.8% delivered via mobile devices. Therefore, 60.1% of all training dollars go to partially or totally online resources. Online training is a financial and temporal necessity in many situations. According to Mulder (1995), organizations spend time, money, and energy to travel to and from training and professional development events, measure the effectiveness of their trainers and training programs, and test that employees are able to understand and implement knowledge learned in training sessions. Moving training to an online forum decreases travel, time, and energy costs, but may sacrifice effectiveness.

Results of this study, when considered in light of recent developments in training delivery, are worth consideration. As more training dollars are spent on computer-mediated delivery systems, managers must be careful to consider the type of information being delivered via training technology. Though more research is needed, it is likely that breaking training information down into further categories (i.e., how to navigate routine and procedural information at work, human resources training, sexual harassment and discrimination training, etc.) would yield different channel selection processes, as some training types may be worth a greater financial and temporal investment than others.

Beyond financial considerations are considerations for the increase of employee knowledge bases. Asselborn and Jans (1995), for instance, argue that organizations are self-learning meta-systems. Creating easily-accessible employee knowledge bases by training employees to not only use knowledge, but to pass it on, will improve organizational efficacy.

This link between efficacy and productivity has not been clearly outlined in academic literature, though training and industry reports describe a correlation between successful training delivery and successful organizations. As additional hypotheses are discussed, this link between channel selection and productivity will be further elucidated.

Channel, Productivity, Stress, Morale, and Trust

Because the appropriate channel selection is associated with increased organizational productivity and decreased conflict (Lengel & Daft, 1989), productivity level was the selected outcome variable for channel selection in this study. Hypotheses 2-5 addresses objective two (determine how the the Net Generation understands productive/counter-productive communication from management). MRT views communication channels as a spectrum from rich to lean, arguing that channels which convey the most cues of social presence are the richest (and will, therefore, be more effective than other channels, leading to more productive communication). Based on MRT, channels that increase productivity the most should be face-to-face and virtual, as those would convey the most cues of social presence. The following section will address the issues uncovered when viewing media as a spectrum, relate the MRT viewpoint to productivity measures, and consider whether the dimensions of richness should be re-evaluated. This is followed by a discussion of the supported hypotheses, 2-5.

As discussed in relation to hypothesis one (information type will affect channel preference), participants were asked to rank order their preferred channels for receiving different types of information. Correspondingly, they were asked to assess how productive a channel would be at relaying five different types of information. Based on frequency counts, the assessment of productivity corresponded with the ranking. That is, the channels ranked as most preferred (face-to-face and electronic) were the channels viewed as most productive at relaying

information (based on Likert-type scales for each channel). This is important, as it suggests that attitudes toward a channel may play a more important role than the inherent richness of the medium alone. This provides support for a social influence model of communication consistent with channel expansion models of channel assessment.

As can be seen from tables 6-10, there are no rankings for any information type which follow the MRT hierarchy beyond face-to-face. Based on the tenets of MRT, expected rankings for private and confidential information, for example, would be: face-to-face, virtual, telephone, electronic, written document. However, for this information type, rankings are as follows: face-to-face (most preferred), followed by the second preference for electronic communication, virtual communication, and written document (as a group), with telephone being the third least preferred channel. Conversely, any information type that requires fewer social presence cues to convey, such as routine and procedural information, should have rankings that (roughly) reflect an inverse of a high-social presence information type. In this case, due to the low effect size, there was no practical significance between channels, suggesting that employees may not have a particular channel preference for receiving routine and procedural information.

This lack of consistency between information type and channel richness calls into question the view of communication channels as a hierarchy of channel ability to convey high or low social presence cues. Instead, the organizational context and communicator characteristics should be incorporated into studies of channel selection in addition to media richness. This does not mean that managers should not "match" information type to the appropriate channel, but that, perhaps, richness is a web of organizational context, communicator characteristics, and media richness, rather than a hierarchy.

Understandings of richness in this population must also be assessed. A channel is considered rich if it is able to convey multiple cues of social presence, facilitate rapid feedback, and use natural language (Daft & Lengel, 1986). However, familiarity with channel type can also play a large role in richness perceptions (Carlson & Zmud, 1999). For this population, the channels with which participants have the most familiarity are (in order): face-to-face, electronic, telephone, written document, and virtual. Therefore, despite the ability of virtual media to convey more social presence cues, participants are unfamiliar with it, and therefore, unlikely to both select it and think that it is productive.

When face-to-face and electronic communication channels are used, a positive linear relationship was found between channel type and productivity (based on five task dimensions: channel's ability to decrease work error, decrease work delays, keep up with fast-paced work, decrease interruption, and keep up with work tasks generally). While face-to-face and electronic might not be the expected first choice for each information type, they are the channels with which this generation is most familiar. This suggests that employers should identify not the structural traits of a medium, but their employees' familiarity with a particular medium, when selecting channels for information delivery. Meaning, even though a video-conference for training delivery or a discussion of compensation and benefits seems appropriate, employees may experience less productivity or satisfaction when receiving information from management in this manner.

Hypothesis 3 states that selecting the most preferred channel would increase employee morale. Morale is a relational construct and can be increased via trust building interactions as a result of bonding (Cowell, 2010). Bonding activities, such as interpersonal reciprocal disclosure, or the request of employee feedback about organizational goals and actions, leads to deeper

interpersonal bonds. These interpersonal bonds are developed primarily through face-to-face interaction. So, it is not surprising that communicating private and confidential information, or training information, face-to-face increases morale among employees. Increased "face-time" with management has consistently been associated with higher employee morale.

Closely tied to morale is employee trust in management, hypothesis 4. Using the most highly ranked and productive channels also increased employees' trust in management. According to Zak (2017), "Employees in high-trust organizations are *more productive* [author emphasis], have more energy at work, collaborate better with their colleagues, and stay with their employers longer than people working at low-trust companies" (p. 86). Broadly sharing information with employees is one of eight dimensions shown to increase trust, and two ways successful organizations have done this is by making information widely available electronically, and by putting in face-time with employees. This dissertation supports earlier research demonstrating that information availability and interpersonal contact with management increases trust. Trust in management leads to lower turnover and more innovative employees (Zak, 2017). Employees are also likely to trust "official" message over gossip when other organizational conditions are satisfied. An email or direct communication with management likely conveys more "officialness" than other channels. Choosing to use face-to-face communication for private and confidential information, training information, compensation and benefits information, and time sensitive information, even when other options might be more convenient, may have more interpersonal and financial benefits that previously thought.

Hypothesis 5, communicating through productive channels of communication will decrease stress, was also supported. Stress is decreased when issues about which employees have uncertainty are addressed. Employees feel stress about equivocal or uncertain situations, and

management communication decisions can increase or alleviate that stress (Weick, 1995). Channels which decrease the amount of message equivocality, then, should decrease stress levels. When face-to-face and electronic channels are used, the Net Generation will feel less stress because their uncertainty is assuaged.

Channel Counter-productivity, Morale, Trust, and Stress

Hypotheses 6-9 test the inverse of hypotheses 2-5, predicting that the the selection of less rich media will result in decreases in productivity, morale, and trust, and increases in stress. Hypotheses 6-9 also addresses objective 2 (determine how the the Net Generation understands productive/counter-productive communication from management). As stated earlier, the Cowell (2010) study measured unproductive and not counter-productive information, so the 2010 study is not included here. With the exception of written document usage increasing stress, all other hypotheses were unsupported. To explore this, generation differences will again be discussed, as well as the constraints inherent in placing productivity in a productive/count-productive binary wherein channel selection is believed to have more predictive power than it actually does. While earlier hypotheses were contrasted with the 2010 Cowell study, Cowell conducted different tests for productivity/counter-productivity (as she was comparing generational cohorts), so comparisons will not be drawn in this section.

The Net Generation has greater familiarity with technology than other generations. Previously discussed literature has noted that the constant presence of technology for social purposes is a large part of the Net Generation's communicative life. Despite a lesser familiarity with using telephone, written documents, or virtual communication at work, the Net Generation is very likely familiar with these channels in social settings (though less so, in the case of written documents). Additionally, 66% of Millennials and Generation Z (the author's Net Generation

alternative) would prefer to discuss business-related information via telephone, versus social media (Greathouse, 2015).

However, preference differs from practice. Net Generation participants typically ranked telephone, written documents, and virtual communication lower than face-to-face and electronic, they view these channels as less productive…but they also use these channels much less and have a lower familiarity level with these channels in a workplace setting. It is possible that while they are less familiar with these channels in workplace settings, they are actively using these channels in their social lives. This may be why older generations found the least preferred channels to be unproductive (Cowell, 2011), but the Net Generation simply views these channels as a lesser choice which does not necessarily affect productivity.

With that in mind, we must consider the forced dichotomy between productive and counter-productive. This forces channels onto a spectrum where one might not necessarily exist. The lack of support for hypothesis three could be explained by this population's general familiarity with technical channels resulting in more neutral attitudes toward certain channels, making the channels less productive, but not necessarily counterproductive. Further, while telephone, written document, and virtual communication may be less preferred, the Net Generation, with its early introduction to technology, may simply lack the organizational context to adequately match these channels to information type.

Regarding an increase in stress as a result of using written document communication (the only condition wherein stress was increased as a result of counter-productive channel usage), there is a literature-backed explanation for this unique occurrence. Written documents are the most equivocal of all messaging strategies. Whether or not a spectrum is considered a valuable way to view communication channels, written documents have the slowest feedback time and the

fewest social presence cues of any other channel. It is not surprising that this particular channel, with its high equivocality and low familiarity among this population, would increase stress.

Differences between the Net Generation and Cowell's (2010) Participants

Cowell's (2010) study relied heavily on previously validated measures used to address productivity and channel selection among Generation X and Baby Boomer employees. Primary differences between the Net Generation, Generation X, and Baby Boomers lie in the preference ranking questions. The Net Generation prefers face-to-face communication for private and confidential information, training information, and time sensitive information. However, given earlier discussions about the costliness of training, it should come as good news to managers that their younger and older employees may prefer the same face-to-face training information delivery. The Net Generation may be more comfortable with computer-mediated training, but all generations in the workplace prefer to receive expensive, time-consuming, and complicated training information in the same way.

Generational differences exist and have been found to affect workplace communication. However, claims that younger employees are socially poor (as a results of smart-phone usage) or unwilling to adapt, have not been supported. This generation prefers face-to-face interaction at even higher rates than older generations. Possibly due to the great economic uncertainty in which they came of age, this need for unequivocal, uncertainty-reducing information (with rapid feedback) is a defining communicative trait of the Net Generation. While they may be more comfortable with technology, they recognize the importance of face-to-face interpersonal engagement, as well as proper electronic messaging.

Limitations

As with any dissertation study, there are limitations. First, while this study uses hierarchical ranking to understand channel selection, it appears that usage and familiarity level may provide additional insight into the myriad ways channels are selected and evaluated in the workplace. The usage of preference ranking across information type demonstrated that medium selection is not necessarily a hierarchy, which is an important theoretical contribution to the body of literature related to MRT, SPT, and CET.

Second, because a research pool was used, participants come from a variety of different organizations and employment levels. Within CET, organizational context is an important predictor of richness perceptions and channel selection. In this study, it was impossible to compare employees from the same organizational setting because all participants were students who work in different fields.

Third, survey fatigue is a well-documented phenomenon on college campuses (Porter, Whitcomb, & Weitzer, 2004). Not only might participants provide lower-quality responses toward the end of longer surveys, student samples are increasingly over-surveyed from multiple angles. In addition to research credits in the College of Communication and Information, students in this sample are also likely to be exposed to surveys conducted in other general education courses (i.e. psychology, sociology, and political science). This, combined with the high number of preference-ranking and ordering questions in this survey, may mean this particular population is experiencing more survey-related fatigue than Net Generation employees who are in the workforce but not enrolled in school.

Future Directions

The forced dichotomy of productive/counter-productive communication must be explored in further detail. With the exception of one condition (written document), using less-preferred

channels does not result in counter-productive task completion, decreases in morale and stress, or decreases in trust. The Net Generation is just more neutral, rather than negatively affected, when their preferred channel is not used. Determining which, if any, channels are truly counter-productive should be addressed in future research.

Although bivariate regressions were sound, additional correlations were found between productivity, task, and behavior variables. These relationships should be explored using structural equation modeling (SEM). Additionally, the alpha levels for some scales used in the bivariate regressions were so high as to suggest that some elements of the task and behavioral variables are repetitive. Because eliminating none of the scale items would increase the alpha levels, all items remained on the scales. Future studies of productivity (task and behavioral) measures ought to identify which components of task completion (if any) are repetitive.

Relating participant demographics to channel selection and understanding would also be valuable. One-way ANOVA could be used to compare perceptions of channels across gender, employment type, racial/ethnic background, and employment experience level. If employees with particular backgrounds view channels differently, this may be valuable information for management to know. Future research comparing demographic groups must take care to avoid stereotyping. It would be harmful to organizational and interpersonal communication relationships to generalize about gender-based understanding and preferences based on these tests. However, this kind of tailored comparison may be helpful at the organizational level.

Organizational context and familiarity with significant others at work have been shown to predict richness perceptions (D'Urso & Rains, 2008). Therefore, similar surveys should be conducted in contained organizational settings. This would not only provide valuable insight to particular organizations, but would allow for comparison across industries, as well as

generations. This would additionally allow further analysis of the increasingly complex communication networks in organizations. Electronic and virtual technologies connect employees who may have previously had very little contact, creating valuable links between departments, employees, and publics.

Technology use as a means to reduce uncertainty in organizations is a well-documented phenomenon (Griffin, Ledbetter, & Sparks, 2014). Individuals use additional, strategic cognitive practices when faced with a mediated communication situation (Walther & Burgoon, 1992). Future studies employing the measures used in this dissertation ought to incorporate questions related to the cognitive process of information seeking. Certain information types, particularly training and time sensitive information are ripe for the study of uncertainty reduction. In training situations or in the delivery of time sensitive information, employees use mental maps to make sense of the new information. When these types of information are delivered via CMC, the maps may look different. Understanding how extractive information seeking strategies occur in a mediated space would be valuable from a theoretical perspective (to strengthen uncertainty reduction theory), and from a practical standpoint (for managers of employees who deliver/receive this type of information).

Final Remarks

There were two primary objectives for this dissertation: determine how the Net Generation understands and selects communication from management across channels, and determine how this cohort understands productive/counter-productive communication from management. These objectives were achieved and valuable insights were found. Beyond the implications for management and the bottom-line costs of training and information delivery, this dissertation counters a common misconception about the Net Generation. Namely, that they are

more involved in technology than their interpersonal interactions. In fact, this generation is highly collaborative and prefers more feedback (at a faster rate) than older generations. While the Net Generation may be more likely to Tweet or Snap their dedication to an organization, they are no less likely to be engaged, collaborative colleagues. Intergeneration differences will persist as technology continues to evolve, but the generations are consistently more similar than different.

REFERENCES

Alexander, C. S. & Sysko, J. M. (2012). A study of the cognitive determinants of generation Y's entitlement mentality. *Academy of Educational Leadership Journal, 16,* 63-68.

Argenti, P. A. (2003). *Corporate Communication. (3rd Ed..,* New York, NY: McGraw-Hill.

Axley, S. R. (2000). Communicating change: Questions to consider. *Industrial Management, July-August 2000,* 18-22.

Baird, C. H. (2015, April 13). 5 myths about millennials in the workplace. *Fortune*. Retrieved from: http://www.fortune.com

Bakeman, R. Recommended effect size statistics for repeated measures designs. *Behavior Research Methods, 37*(3), 379-384.

Bartley, S., Kupritz, V. W., & Mills, J. (2004). Effective management communication: A study of employees' perceptions of online and face-to-face communications. *Proceedings of the International Academy of Human Resource Development conference.*

Bekebrede, G., Warmelink, H.J.G., & Mayer, I. S. (2011). Reviewing the need for gaming in education to accommodate the Net Generation. *Computers & Education, 57*, 1521-1529.

Berkowitz, E. N. & Schewe, C. D. (2011). Generational cohorts hold the key to understanding patients and healthcare providers: Coming-of-age experiences influence healthcare behaviors for a lifetime. *Health Marketing Quarterly, 28*, 190-204.

Biocca, F., Harms, C., & Burgoon, J. K. (2003). Toward a more robust theory and measure of social presence: Review and suggested criteria. *Presence, 12*(5), 456-480.

Bisel, R. S. (2010). A Communicative ontology of organization? A description, history, and critique of CCO theories for organization science. *Management Communication Quarterly, 24*, 124-131.

Brummans, B., Cooren, F., Taylor, J. R. & Robichaud, D. (2014). Approaches to the communicative constitution of organizations. In L. Putnam & D. Mumby (Eds), *Organizational communication: Advances in theory, research, and methods* (pp. 173-194). Beverley Hills, CA: Sage.

Bush, A. J., Martin, C. A., & Bush, V. D. (2004). Sports Celebrity Influence on the Behavioral Intentions of Generation Y. *Journal of Advertising Research, 44*, 108-118.

Carlson, J. R., & Zmud, R. W., (1999). Channel expansion theory and the experiential nature of media richness perceptions. *Academy of Management Journal, 42*(2), 153-170.

Cennamo, L., & Gardner, D. (2008). Generational differences in work values, outcomes and person-organisation values fit. *Journal of Managerial Psychology*, *23*, 891-906.

Collins, M. H., Hair, J. F., & Rocco, T. S. (2009). The older-worker-younger-supervisor dyad: A test of the reverse Pygmalion Effect. *Human Resource Development Quarterly, 20*, 21-41.

Coomes, M. D. & DeBard, R. (2004). A generational approach to understanding students. *New Directions for Student Services, 106*, 5-16.

Cowell, E. (2010). Generational Perceptions of Productive/Unproductive Information Received from Management through Different Communication Channels. *PhD diss., University of Tennessee*, 2010. Retrieved from http://trace.tennessee.edu/utk_graddiss/684

Crabtree, J. L. & Fisher, T. F. (2009). Generational cohort theory: Have we overlooked an important aspect of the entry-level occupational therapy doctorate debate? *American Journal of Occupational Therapy, 63*, 656-662.

Cutler, N. E., & Bengston, V. L. (1974). Age and political alienation: Maturation, generation and period effects. *Annals of the American Academy of Political and Social Science, 415*, 160-175.

Daft, R. L., & Lengel, R. H. (1984). Information Richness: A new approach to manager information processing and organization design. In B. Staw & L. Cumming (Eds.) *Research in Organizational Behavior,* 191-233. Greenwich, CT: JAI Press.

Daft, R. L., Lengel, R. H., & Trevino, L. K. (1984). Message equivocality, media selection, and manager performance: Implications for information systems. *MIS Quarterly, 11*, 355-366.

Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management Science*, *32*, 554-571.

Daft, R. L., & Weick, K. E. (1984). Toward a model of organizations as interpretation systems. *Academy of Management Review, 9,* 284-295.

Dennis, A. R., & Kinney, S. T. (1998). Testing media richness theory in the new media: The effects of cues, feedback, and task equivocality. *Information Systems Research, 9,* 256-274.

DeWine, S. (2004). International Communication Audit. In R. B. Rubin, P. Palmgreen, & H. E. Sypher (Eds.) *Communication Research Measures: A sourcebook*, (193-205). Mahwah, NJ: Lawrence Erlbaum.

Earle, V. & Myrick, F., Yonge, O. (2010). Preceptorship in the intergenerational context: An integrative review of the literature. *Nurse Education Today, 31*, 82-87.

Eastman, L. J. (1993). Retirement revisited: Extending the work-life of older Americans. *Human Resource Development Quarterly, 4*, 409-414.

Evans, R. & Forbes, L. (2012). Mentoring the 'Net Generation': Faculty perspectives in health education. *College Student Journal, 46,* 397-404.

Eyerman, R., & Turner, B. S. (1998). Outline of a theory of generations. *European Journal of Social Theory, 1,* 91-106.

Faber, B. D. (2009). Gen/Ethics? Organizational ethics and student and instructor conflicts in workplace training. *Technical Communication Quarterly, 10,* 291-318.

Favero, L. W. & Heath, R. G. (2012). Generational perspectives in the workplace: Interpreting the discourses that constitute women's struggle to balance work and life. *Journal of Business Communication, 49,* 332-356.

Field, A. (2013). *Discovering statistics using IBM SPSS Statistics*. SAGE Publications, Inc.: Thousand Oaks, CA.

Fry, R. (2015, January 16). This year, millennials will overtake baby boomers. *Pew Research Center*. Retrieved from: http://www.pewresearch.org/

Furnham, A. (2005). *The psychology of people at work: The individuals in the organization, (2nd Ed.)* New York, NY: Psychology Press.

Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration.* Cambridge, MA: Polity Press.

Glass, A. Understanding generational differences for competitive success. *Industrial and Commercial Training, 39,* 98-103.

Glenn, N. D. (1976). Cohort analysts' futile quest: Statistical attempts to separate age, period, and cohort effects. *American Sociological Review, 41,* 900-904.

Glenn, N. D., Taylor, P. A., & Weaver, C. N. (1977). Age and job satisfaction among males and females: A multivariate, multi-survey study. *Journal of Applied Psychology, 62,* 189-193.

Griffin, E., Ledbetter, A., & Sparks, G. (2015) *A first look at communication theory* (9th ed.). New York; McGraw-Hill.

Gursoy, D., Maier, T. A., & Chi, C. G. (2007). Generational differences: An examination of work values and generational gaps in the hospitality workforce. *Hospitality Management, 27*, 448-458.

Hahn, J. A. (2011). Managing multiple generations: Scenarios from the workplace. *Nursing Forum, 46*, 119-127.

Hargie, O., & Tourish, D. (2004*). Handbook of communication audits for organisations*. London: Routledge.

Hernaus, T. & Vokic, N. P. (2014). Work design for different generational cohorts: Determining common and idiosyncratic job characteristics. *Journal of Organizational Change Management, 27*, 615-641.

Hillman, D. R. (2014). Understanding multigenerational work-value conflict resolution. Journal of *Workplace Behavioral Health, 29*, 240-257.

Howe, N., & Strauss, W. (1991). *Generations: The History of America's Future, 1584 to 2069* New York, NY: Morrow.

Howe, N., Strauss, W., Matson, R. J., & Williams, I. (1993). *13th Gen: Abort, ignore, retry, fail?*. New York, NY: Vintage.

Howe, N., & Strauss, W. (1997). *The fourth turning: An American prophecy - what the cycles of history tell us about America's next rendezvous with destiny*. New York, NY: Broadway.

Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation*. New York, NY: Vintage.

Hynes, G. E. (2016). *Managerial communication: Strategies and applications (6th edition).* Thousand Oaks, CA: SAGE.

Huck, S. (2012). *Reading statistics and research.* Boston, MA: Pearson.

Iverson, J. O., & McPhee, R. D. (2008). Communicating knowledge through communities of practice: Exploring internal communicative processes and differences among CoPs. *Journal of Applied Communication Research, 36,* 176-199.

Jones, C., Ramanau, R., Cross, S., & Healing, G. (2009). Net generation or digital natives: Is there a distinct new generation entering university? *Computers & Education, 54*, 722-732.

Judd, T. & Kennedy, G. (2011). Measurement and evidence of computer-based task switching and multitasking by Net Generation students. *Computers & Education, 56*, 625-631.

Kirsh, D. (2000). A few thoughts on cognitive overload. *Intellectica, 2000* (White paper).

Kramer, M. W. (2011). Toward a communication model for the socialization of voluntary members. *Communication Monographs, 78*, 233-255.

Kupritz, V. (2001). Aging worker perceptions about design and privacy needs for work. *Journal of Architectural & Planning Research, 18,* 13-22.

Kupritz, V. W. (2002). The relative impact of workplace design on training transfer. *Human Resource Development Quarterly, 13*, 427-447.

Kupritz, V. W. & Cowell, E. (2011). Productive management communication: Online and face-to-face. *Journal of Business Communication, 48*(1), 54-82.

Kuyath, S. J. & Winter, S. J. (2006). Distance education in communication: The social presence and media richness of synchronous and asynchronous media. *Journal of Asynchronous Learning Networks, 9*, 135-142.

Leonardi, P. M., Huysman, M., & Steinfield, C. (2013). Enterprise social media: Definition, history, and prospects for the study of social technology in organizations. *Journal of Computer-Mediated Communication, 19*, 1-19.

Littlejohn, S. W. & Foss, K. A. (2011). *Theories of human communication*. Long Grove, IL: Waveland Press.

Maier, T. A. (2011). Hospitality leadership implications: Multigenerational perceptions of dissatisfaction and intent to leave. *Journal of Human Resources in Hospitality and Tourism, 10*, 354-371.

Mannheim, K. (1952). 'The problem of generations' in Mannheim, K. *Essays on the sociology of knowledge*. London: RKP.

May, S., & Mumby, D. K. (2005). *Engaging organizational communication theory & research*. Thousand Oaks, CA: SAGE Publications Inc.

McCann, R. M. & Giles, H. (2007). Age-differentiated communication in organizations: Perspectives from Thailand and the United States. *Communication Research Reports, 24*, 1-12.

McGuire, D., By, R. T., & Hutchings, K. (2007). Towards a model of human resource solutions for achieving intergenerational interaction in organizations. *Journal of European Industrial Training, 31*, 592–608.

McPhee, R. D., Poole, M. S., & Iverson, J. (2014). Structuration theory. In L. Putnam & D. Mumby (Eds.), *Handbook of Organizational Communication* (pp. 75-100). Thousand Oaks, CA: Sage.

McPhee, R. D., & Zaug, P. (2000). Organizational theory, organizational communication, organizational knowledge, and problematic integration. *Journal of Communication, 51*, 574-591.

Meister, J. C., & Willyerd, K. (2010). Mentoring millennials: Delivering the feedback Gen Y craves is easier than you think. *Harvard Business Review*, *88*, 68-72.

Mendelson, M. (2013). The millennial generation: Receiving a fair exchange? *Journal of Intergenerational Relationships, 11*, 324-328.

Midtsundstad, T. I. (2011). Inclusive workplaces and older employees: An analysis of companies' investment in retaining older workers. *The International Journal of Human Resource Management, 22*, 1277-1293.

Myers, K. K. & Sadaghiani, K. (2010). Millennials in the workplace: A communication perspective on millennials' organizational relationships and performance. *Journal of Business Psychology, 25*, 225-238.

Ogbeide, G., Fenich, G. G., Scott-Halsell, S., & Kesterson, K. (2013). Communication preferences for attracting the millennial generation to attend meetings and events. *Journal of Convention and Event Tourism, 14*, 331-344.

Otondo, R. F., Van Scohotter, J. R., Allen, D. G., & Palvia, P. (2008). The complexity of richness: Media, message, and communication outcomes. *Information & Management, 45*, 21-30.

Pilcher, J. (1994). Mannheim's sociology of generations: An undervalued legacy. *British Journal of Sociology*, *45*, 481-495.

Pilotte, M. & Evangelou, D. (2014). Building bridges-identifying generational communication characteristics to facilitate engineering collaboration and knowledge transfer across field-practicing engineers. *Engineering Studies, 4*, 79-99.

Pogson, C. E., Cober, A. B., Doverspike, D., & Rogers, J. R. (2003). Differences in self-reported work ethic across three career stages. *Journal of Vocational Behavior, 62,* 189-201.

Polach, J. L. (2004). Understanding the experience of college graduates during their first year of employment. *Human Resource Development Quarterly, 15,* 5-23.

Reisenwitz, T.H., & Iyer, R. (2009). Differences in Generation X and Generation Y: Implications for the organization and marketers. *Marketing Management Journal, 19,* 91-103.

Schoeneborn, D. (2011). Organization as communication: A Luhmannian perspective. *Management Communication Quarterly, 25,* 663-689.

Schullery, N. (2013). Workplace engagement and generational differences in values. Business *Communication Quarterly, 76,* 252-265.

Scott, C., & Myers, K. (2010). Toward an integrative theoretical perspective on organizational membership negotiations: Socialization, assimilation, and the duality of structure. *Communication Theory, 20,* 79-105.

Seipert, K. & Baghurst, T. (2014). Contrasting work values of baby boomer and generation X rural public school principals. *Public Administration Quarterly*, Fall, 347-361.

Sessa, V. I., Kabacoff, R. I., Deal, J., & Brown, H. (2007). II. Research tools for the psychologist-manager: Generational differences in leader values and leadership behaviors. *Psychologist-Manager Journal, 10,* 47-74.

Siegel, S. R. (1993). Relationships between current performance and likelihood of promotion for old versus young workers. *Human Resource Development Quarterly, 4,* 39-50.

Smith, S. D. & Gilbraith, Q. (2012). Motivating millennials: Improving practices in recruiting, retaining, and motivating younger library staff. *Journal of Academic Librarianship, 38*, 135-144.

Smola, K. W. & Sutton, C. D. (2002). Generational differences: Revisiting generational work values for the new millennium. *Journal of Organizational Behavior, 23*, 363-382.

So, H-J., Choi, H., Lim, W. L., & Xiong, Y. (2011). Little experience with ICT: Are they really the Net Generation student teachers? *Computers & Education, 59*, 1234-1245.

Stein, D., Rocco, T. S., & Goldenetz, K. A. (2000). Age and the university workplace: A case study of remaining, retiring, or returning older workers. *Human Resource Development Quarterly, 11*, 61-80.

Strauss, W., & Howe, N. (1991). *Generations: The history of America's future, 1584 to 2069*. New Youk, NY: Quill William Morrow.

Suh, K. S. (1999). Impact of communication medium on task performance and an examination of media-richness theory. *Information & Management, 35*, 295-312.

Taylor, J. R. (2011). Organization as (imbricated) configuration of transactions. *Organization Studies, 32*, 1273-1294.

Towers Watson, Inc. (2014). 2013- 2014 change and communication ROI: The 10th anniversary report. How the fundamentals have evolved and the best adapt, 1-13. Retrieved April 10, 2016, from https://www.towerswatson.com/en-US/Insights/IC-Types/Survey-Research-Results/2013/12/2013-2014-change-and-communication-roi-study

Twenge, J. M. (2006*). Generation me.* New York,NY: Free Press.

Twenge, J. M., Campbell, S. M., Hoffman, B. J., & Lance, C. E. (2010). Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing. *Journal of Management, 36,* 1117-1142.

Valente, S. (2010). Intergenerational externalities, sustainability and welfare: The ambiguous effect of optimal policies on resource depletion. *Resource and Energy Economics, 33,* 995-1014.

Van Maanen, J., & Schein, E. (1979). Toward a theory of organizational socialization. *Research in Organizational Behavior, 1,* 209–264.

VanMeter, R. A., Grisaffe, D. B., Chonko, L. B., & Roberts, J. A. (2013). Generation Y's ethical ideology and it potential workplace implications. *Journal of Business Ethics, 117,* 93-109.

Wade-Benzoni, K. A. (2002). A golden rule over time: Reciprocity in intergenerational allocation decisions. *Academy of Management Journal, 45,* 1011–1028.

Walther, J. B. & Burgoon, J. K. (1992). Relational communication in computer mediated interaction. *Human Communication Research, 19,* 50-88.

Weick, K. E. (1995). *Sensemaking in organizations*. London: Sage.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science, 16,* 409 – 421.

Weingarten, R. M. (2009). Four generations, one workplace: A gen X-Y staff nurse's view of team building in the emergency department. *Journal of Emergency Nursing, 35,* 27-31.

Zemke, R. (2001). Here come the millennials. *Training, 38*(7) 44-53.

Zimmermann, S., Sypher, B. D., & Haas, J. W. (1996). A communication metamyth in the workplace: The assumption that more is better. *The Journal of Business Communication, 33*, 185-204.

APPENDICES

APPENDIX A

COMMUNICATION CHANNEL SURVEY

Q1 Net Generation Communication Channel Preferences in the Workplace You are invited to participate in a research study that is being conducted by Whitney Tipton, a doctoral student at the University of Tennessee. The purpose of this study is to understand your communication preferences in the workplace, or, if you do not yet work, what you expect from workplace communication. Your participation in this study will involve filling out an online survey and answering questions about your feelings toward workplace communication. This survey will take roughly 35 minutes to complete. Students participating in this study through the CMST Student research pool will receive two (2) credits for completion of this study. You may choose not to participate in this study at any time. If you decide not to participate, there will not be a penalty to you or loss of any benefits to which you are otherwise entitled. You will be given an alternative assignment. Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. There are no anticipated risks greater than those encountered in everyday life. The information in the study records will be kept confidential. Data will be stored securely in a password protected computer and will be made available only to persons conducting the research. No reference will be made in oral or written reports which could link you to the study. This study will benefit net generation aged employees and their employers by identifying the most effective ways to share workplace-related information. Employees and employers may have increased understanding and decreased conflict as a result of reading the results of this study. This study will benefit researchers by providing information about an age group for which there is conflicting information about workplace communication practices. If you have questions at any time about the study or the procedures, you may contact Whitney Tipton at -850-867-1720, or wtipton1@utk.edu; or Virginia Kupritz at 1-865-548-1392, or ginger1@utk.edu. If you have questions about your rights as a participant, contact the Office of Research Compliance Officer at 1-865- 974-7697, or at utkirb@utk.edu. By clicking to continue to the next page you are indicating that you have read and understand this consent form, that you are at least 18 years of age and are consent to participate in the study.

❍ I agree to participate (1)

Q4 Please read the following instructions and definitions related to this survey. INSTRUCTIONS: This survey lists communication channels and types of information received from management through these channels. The communication channels listed are: Face-to-Face, Telephone, Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards), Electronic Media, (e-mail, text, I-M, Internet, Intranet), and Virtual Media (teleconferencing, I-chat, video conferencing, interactive DVD or CD). The types of information listed are: Private and Confidential (including evaluations, performance reviews), Routine and Procedural (Standard Operating Procedures), Time-sensitive (emergency situations, tasks with immediate urgency, tasks with shortened deadlines), Training (initial on-the-job training, subsequent training, workshops, modules and orientation), Compensation and Benefits (plan selection, changes in compensation and benefits packages, new offerings).

Q6 Please input the five-digit code given to you by SONA. Incorrectly typing your code will cause your participation to not be counted.

Q2 First, please select the description below which best describes your work schedule. I work:

- ❍ Full-time (1)
- ❍ Part-time (2)
- ❍ Do not currently work full-time, but have worked full-time in the past (3)
- ❍ Do not currently work part-time, but have worked at least part-time in the past (4)
- ❍ Hold an unpaid internship, and am not a paid employee (5)
- ❍ Hold a paid internship (6)
- ❍ Do volunteer work, and do not do paid work (7)
- ❍ Do not work (8)

Q5 What is your age? (List number only)

Q7 Please rank order (from 1-least preferred to 5-most preferred) your preference for receiving the types of information listed in the left-hand column from management. Type "1" in the box for your least preferred communication channel for receiving this category of information and proceed to rank the other four communication channels (by typing the number in the box) until

you have utilized 2, 3, 4, and 5 (most preferred). Repeat this for each of the types of information listed on the left-hand column.

	Face to face (1)	Telephone (2)	Written Document (memos, letters, newsletters, manuals, instructions, bulletin boards) (3)	Electronic Media (e-mail, text, I-M, Internet, Intranet) (4)	Virtual Media (teleconferencing, video-chat, video conferencing, interactive DVD or CD) (5)
Private and confidential information (1)					
Routine and procedural information (2)					
Training information (3)					
Compensation and benefits information (4)					
Time sensitive information (5)					

Q8 You will now be asked questions about the level of productivity of each communication channel in relation to the category of information received from your boss/supervisor/manager. For each question please select whether you feel that the channel type and information category received are Very Counter-productive, Counter-Productive, Neither Productive or Counter-productive, productive, or very productive to your workday. The word ‘management’ in this survey means your immediate supervisor or one level up, boss, manager, or whoever is responsible for the primary delegation of tasks and workload to you. The word ‘productive’ in this survey means one or more of the following: producing; completing a job or task in a productive manner; to move forward; doing your job in a competent, efficient and accurate manner; to effectively use time and resources that are available to complete a desired task in the shortest time possible; to do quality work in a timely manner; generating work in a successful and timely way; and completing a task in an efficient amount of time. The word “counterproductive” in this survey means one or more of the following: waste of time; not

relevant to my job; does not add anything to my job; of no value to my job; and does not make my job more productive or effective. Face-to-face communication received from management is:

	Very counter-productive (1)	Counter-productive (2)	Neither productive nor counter-productive (3)	Productive (4)	Very productive (5)
Private and confidential information (evaluations, raises, terminations) received from management face-to-face is: (1)	❍	❍	❍	❍	❍
Routine and procedural information (Standard Operating Procedures) received from management face-to-face is: (2)	❍	❍	❍	❍	❍
Time sensitive information received from management face-to-face is: (3)	❍	❍	❍	❍	❍
Training presentation information (workshops, modules and orientation) received from management face-to-face is: (4)	❍	❍	❍	❍	❍

Compensation and benefits information received from management face-to-face is: (5)	❍	❍	❍	❍	❍

Q9 Telephone communication received from management is:

	Very counter-productive (1)	Counter-productive (2)	Neither productive nor counter-productive (3)	Productive (4)	Very productive (5)
Private and confidential information (evaluations, raises, terminations) received from management via telephone is: (1)	❍	❍	❍	❍	❍
Routine and procedural information (Standard Operating Procedures) received from management via telephone is: (2)	❍	❍	❍	❍	❍
Time sensitive information received from management via telephone is: (3)	❍	❍	❍	❍	❍
Training presentation information (workshops, modules and orientation) received from management via telephone is: (4)	❍	❍	❍	❍	❍

Compensation and benefits information received from management via telephone is: (5)	❍	❍	❍	❍	❍

Q10 Written document communication (memos, letters, newsletters, manuals, instructions, bulletin boards) received from management is:

	Very counter-productive (1)	Counter-productive (2)	Neither productive nor counter-productive (3)	Productive (4)	Very productive (5)
Private and confidential information (evaluations, raises, terminations) received from management via written documents is: (1)	❍	❍	❍	❍	❍
Routine and procedural information (Standard Operating Procedures) received from management via written documents is: (2)	❍	❍	❍	❍	❍
Time sensitive information received from management via written documents is: (3)	❍	❍	❍	❍	❍

Training presentation information (workshops, modules and orientation) received from management via written documents is: (4)	❍	❍	❍	❍	❍
Compensation and benefits information received from management via written documents is: (5)	❍	❍	❍	❍	❍

Q11 Electronic Media Communication (e-mail, text, Blackberry, IM, Internet, Intranet) received from management is:

	Very counter-productive (1)	Counter-productive (2)	Neither productive nor counter-productive (3)	Productive (4)	Very productive (5)
Private and confidential information (evaluations, raises, terminations) received from management via electronic media is: (1)	❍	❍	❍	❍	❍
Routine and procedural information (Standard Operating Procedures) received from management via electronic media is: (2)	❍	❍	❍	❍	❍
Time sensitive information received from management via electronic media is: (3)	❍	❍	❍	❍	❍
Training presentation information (workshops, modules and orientation) received from management via electronic media is: (4)	❍	❍	❍	❍	❍

Compensation and benefits information received from management via electronic media is: (5)	❍	❍	❍	❍	❍

Q12 Virtual Media Communication (teleconferencing, I-chat, video conferencing, interactive DVD or CD) received from management is:

	Very counter-productive (1)	Counter-productive (2)	Neither productive nor counter-productive (3)	Productive (4)	Very productive (5)
Private and confidential information (evaluations, raises, terminations) received from management via virtual media is: (1)	❍	❍	❍	❍	❍
Routine and procedural information (Standard Operating Procedures) received from management via virtual media is: (2)	❍	❍	❍	❍	❍
Time sensitive information received from management via virtual media is: (3)	❍	❍	❍	❍	❍
Training presentation information (workshops, modules and orientation) received from management via virtual media is: (4)	❍	❍	❍	❍	❍

Compensation and benefits information received from management via virtual media is: (5)	❍	❍	❍	❍	❍

Q13 The next questions address the degree to which you feel "productive" information received from management through each communication channel affects your productivity. For each question please select the degree (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree) that represents the effect of the information by channel on your day or your perception of your job. The word ‘productive’ in this survey means one or more of the following: producing; completing a job or task in a productive manner; to move forward; doing your job in a competent, efficient and accurate manner; to effectively use time and resources that are available to complete a desired task in the shortest time possible; to do quality work in a timely manner; generating work in a successful and timely way; and completing a task in an efficient amount of time. The word ‘management’ in this survey means your immediate supervisor or one

level up, whoever is responsible for the primary delegation of tasks and workload to you. Routinely receiving productive information face-to face from management: PRODUCTIVITY DV

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Decreases work error (1)	❍	❍	❍	❍	❍
Decreases work delays (2)	❍	❍	❍	❍	❍
Makes it easier to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Reduces interruptions (4)	❍	❍	❍	❍	❍
Makes it easier to complete work tasks (5)	❍	❍	❍	❍	❍
Increases morale (6)	❍	❍	❍	❍	❍
Increases trust (7)	❍	❍	❍	❍	❍
Reduces stress (8)	❍	❍	❍	❍	❍

Q14 Routinely receiving productive information by telephone from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Decreases work error (1)	❍	❍	❍	❍	❍
Decreases work delays (2)	❍	❍	❍	❍	❍
Makes it easier to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Reduces interruptions (4)	❍	❍	❍	❍	❍
Makes it easier to complete work tasks (5)	❍	❍	❍	❍	❍
Increases morale (6)	❍	❍	❍	❍	❍
Increases trust (7)	❍	❍	❍	❍	❍
Reduces stress (8)	❍	❍	❍	❍	❍

Q15 Routinely receiving productive information by written documents (memos, letters, newsletters, manuals, instructions, bulletin boards) from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Decreases work error (1)	❍	❍	❍	❍	❍
Decreases work delays (2)	❍	❍	❍	❍	❍
Makes it easier to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Reduces interruptions (4)	❍	❍	❍	❍	❍
Makes it easier to complete work tasks (5)	❍	❍	❍	❍	❍
Increases morale (6)	❍	❍	❍	❍	❍
Increases trust (7)	❍	❍	❍	❍	❍
Reduces stress (8)	❍	❍	❍	❍	❍

Q16 Routinely receiving productive information by electronic media (e-mail, text, Blackberry, I-M, Internet, Intranet) from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Decreases work error (1)	❍	❍	❍	❍	❍
Decreases work delays (2)	❍	❍	❍	❍	❍
Makes it easier to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Reduces interruptions (4)	❍	❍	❍	❍	❍
Makes it easier to complete work tasks (5)	❍	❍	❍	❍	❍
Increases morale (6)	❍	❍	❍	❍	❍
Increases trust (7)	❍	❍	❍	❍	❍
Reduces stress (8)	❍	❍	❍	❍	❍

Q17 Routinely receiving productive information by virtual media (teleconferencing, video-chat, video conferencing, interactive DVD or CD) from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Decreases work error (1)	❍	❍	❍	❍	❍
Decreases work delays (2)	❍	❍	❍	❍	❍
Makes it easier to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Reduces interruptions (4)	❍	❍	❍	❍	❍
Makes it easier to complete work tasks (5)	❍	❍	❍	❍	❍
Increases morale (6)	❍	❍	❍	❍	❍
Increases trust (7)	❍	❍	❍	❍	❍
Reduces stress (8)	❍	❍	❍	❍	❍

Q18 The next questions address the degree to which you feel "counter-productive" information received from management through each communication channel affects your productivity. For each question please select the degree (strongly disagree, disagree, neither agree nor disagree, agree, strongly agree) that represents the effect of the information by channel on your day or your perception of your job. The word “counter-productive” in this survey means one or more of the following: waste of time; not relevant to my job; does not add anything to my job; of no value to my job; and does not make my job more productive or effective. The word ‘management’ in this survey means your immediate supervisor, boss, manager, or one level up,

whoever is responsible for the primary delegation of tasks and workload to you. Routinely receiving counter-productive information face-to-face from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Increases work error (1)	❍	❍	❍	❍	❍
Increases work delays (2)	❍	❍	❍	❍	❍
Makes it harder to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Increases interruptions (4)	❍	❍	❍	❍	❍
Makes it harder to complete work tasks (5)	❍	❍	❍	❍	❍
Decreases morale (6)	❍	❍	❍	❍	❍
Decreases trust (7)	❍	❍	❍	❍	❍
Increases stress (8)	❍	❍	❍	❍	❍

Q19 Routinely receiving counter-productive information by telephone from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Increases work error (1)	❍	❍	❍	❍	❍
Increases work delays (2)	❍	❍	❍	❍	❍
Makes it harder to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Increases interruptions (4)	❍	❍	❍	❍	❍
Makes it harder to complete work tasks (5)	❍	❍	❍	❍	❍
Decreases morale (6)	❍	❍	❍	❍	❍
Decreases trust (7)	❍	❍	❍	❍	❍
Increases stress (8)	❍	❍	❍	❍	❍

Q20 Routinely receiving counter-productive information by written documents (memos, letters, newsletters, manuals, instructions, bulletin boards) from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Increases work error (1)	❍	❍	❍	❍	❍
Increases work delays (2)	❍	❍	❍	❍	❍
Makes it harder to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Increases interruptions (4)	❍	❍	❍	❍	❍
Makes it harder to complete work tasks (5)	❍	❍	❍	❍	❍
Decreases morale (6)	❍	❍	❍	❍	❍
Decreases trust (7)	❍	❍	❍	❍	❍
Increases stress (8)	❍	❍	❍	❍	❍

Q21 Routinely receiving counter-productive information by electronic media (e-mail, text, Blackberry, I-M, Internet, Intranet) from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Increases work error (1)	❍	❍	❍	❍	❍
Increases work delays (2)	❍	❍	❍	❍	❍
Makes it harder to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Increases interruptions (4)	❍	❍	❍	❍	❍
Makes it harder to complete work tasks (5)	❍	❍	❍	❍	❍
Decreases morale (6)	❍	❍	❍	❍	❍
Decreases trust (7)	❍	❍	❍	❍	❍
Increases stress (8)	❍	❍	❍	❍	❍

Q22 Routinely receiving counter-productive information by virtual media (teleconferencing, video-chat, video conferencing, interactive DVD or CD) from management:

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Increases work error (1)	❍	❍	❍	❍	❍
Increases work delays (2)	❍	❍	❍	❍	❍
Makes it harder to keep up with fast-paced work (3)	❍	❍	❍	❍	❍
Increases interruptions (4)	❍	❍	❍	❍	❍
Makes it harder to complete work tasks (5)	❍	❍	❍	❍	❍
Decreases morale (6)	❍	❍	❍	❍	❍
Decreases trust (7)	❍	❍	❍	❍	❍
Increases stress (8)	❍	❍	❍	❍	❍

Q23 Please indicate the frequency that each channel is used in your organization. If you are not employed, please select Not Applicable.

	Daily (1)	Weekly (2)	Monthly (3)	Quarterly (4)	Yearly (5)	My organization does not use this channel	Not Applicable - I do not work (7)
Face-to-face	❍	❍	❍	❍	❍	❍	❍
Telephone	❍	❍	❍	❍	❍	❍	❍
Written document (letters, memos, newsletters, manuals, instructions)	❍	❍	❍	❍	❍	❍	❍
Electronic media (email, text, IM, internet, intranet)	❍	❍	❍	❍	❍	❍	❍
Virtual Media (teleconferencing, i-chat, video-conferencing, interactive DVD or CD)	❍	❍	❍	❍	❍	❍	❍

Q24 Please answer the following questions about video-chatting with a communication partner from work, by stating the degree to which you agree with the statements below. Imagine you are communicating with a someone from work who you know well.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
Overall, I feel I know my communication partner well (1)	❍	❍	❍	❍	❍
I feel comfortable discussing emotional issues with my communication partner (2)	❍	❍	❍	❍	❍
I would feel competent video chatting with my communication partner (3)	❍	❍	❍	❍	❍
I do not trust my communication partner (4)	❍	❍	❍	❍	❍
I would feel comfortable discussing private issues with my communication partner (5)	❍	❍	❍	❍	❍
I feel close to my communication partner (6)	❍	❍	❍	❍	❍
I feel comfortable using informal communication (such as slang) with my communication partner (7)	❍	❍	❍	❍	❍

I feel comfortable with my communication partner (8)	❍	❍	❍	❍	❍
I feel more comfortable communicating in a formal manner with my communication partner, rather than in an informal manner (9)	❍	❍	❍	❍	❍
I would feel competent using video-chat (10)	❍	❍	❍	❍	❍

Q26 Please answer the following questions about video-chatting with a communication partner from work, by stating the degree to which you agree with the statements below. Imagine you are communicating with someone from work who you do not know well.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
Overall, I feel that I know my communication partner well (1)	❍	❍	❍	❍	❍
I feel comfortable communicating emotional issues with my communication partner (2)	❍	❍	❍	❍	❍
I feel competent using video-chat (3)	❍	❍	❍	❍	❍
I do not trust my communication partner (4)	❍	❍	❍	❍	❍
I feel comfortable discussing private issues with my communication partner (5)	❍	❍	❍	❍	❍
I feel close to my communication partner (6)	❍	❍	❍	❍	❍
I feel comfortable using informal communication (such as slang) with my communication partner (7)	❍	❍	❍	❍	❍

I feel more comfortable communicating in a formal manner with my communication partner, rather than in an informal manner. (8)	❍	❍	❍	❍	❍

Q27 Please rate your level of agreement with the following statements. I would feel comfortable discussing private and confidential information via video chat.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I feel that I am experienced in communicating private and confidential information (1)	❍	❍	❍	❍	❍
I feel that I am well-versed in the concepts associated with communicating private and confidential information (2)	❍	❍	❍	❍	❍
I do not feel comfortable communicating private and confidential information (3)	❍	❍	❍	❍	❍

Q28 I would feel comfortable discussing routine and procedural information via video chat.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I feel that I am experienced in communicating routine and procedural information (1)	❍	❍	❍	❍	❍
I feel that I am well-versed in the concepts associated with routine and procedural information (2)	❍	❍	❍	❍	❍
I do not feel comfortable communicating routine and procedural information (3)	❍	❍	❍	❍	❍

Q29 I would feel comfortable discussing time-sensitive information via video chat.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I feel that I am experienced in communicating time-sensitive information (1)	❍	❍	❍	❍	❍
I feel that I am well-versed in the concepts associated with time-sensitive information (2)	❍	❍	❍	❍	❍
I do not feel comfortable communicating time-sensitive information (3)	❍	❍	❍	❍	❍

Q30 I would feel comfortable discussing training-related information via video chat.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I feel that I am experienced in communicating training-related information (1)	❍	❍	❍	❍	❍
I feel that I am well-versed in the concepts associated with training-related information (2)	❍	❍	❍	❍	❍
I do not feel comfortable communicating training-related information (3)	❍	❍	❍	❍	❍

Q31 I would feel comfortable discussing compensation-related information via video chat.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I feel that I am experienced in communicating compensated-related information (1)	❍	❍	❍	❍	❍
I feel that I am well-versed in the concepts associated with compensation-related information (2)	❍	❍	❍	❍	❍
I do not feel comfortable communicating compensation-related information (3)	❍	❍	❍	❍	❍

Q32 Please rate your level of agreement with the following statements related to your job.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I am well-versed in the internal affairs of my organization (1)	❍	❍	❍	❍	❍
I am familiar with the culture of my organization (2)	❍	❍	❍	❍	❍
I use jargon which is specific to my organization (3)	❍	❍	❍	❍	❍
My communication partner and I have similar familiarity with our organization (4)	❍	❍	❍	❍	❍
When communicating with my communication partner, I am able to use organization-specific jargon and cultural references (5)	❍	❍	❍	❍	❍

Q33 Please rate your level of agreement with the following statements related to your coworkers' use of video-chat.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
My coworkers frequently use video-chat to communicate (1)	❍	❍	❍	❍	❍
My coworkers have expressed how easy it is to use video chat (2)	❍	❍	❍	❍	❍
My boss/manager/supervisor has expressed to me how useful video chat is (3)	❍	❍	❍	❍	❍
My boss/manager/supervisor frequently uses video chat to communicate (4)	❍	❍	❍	❍	❍

Q34 Please rate your level of agreement with the following statements related to your views of using video chat to communicate work-related information while at work.

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Stroly disagree (5)
Video-chat allows my communication partner and I to give and receive timely feedback (1)	❍	❍	❍	❍	❍
Video-chat allows my communication partner and I to tailor our messages to our personal requirements (2)	❍	❍	❍	❍	❍
Video-chat allows my communication partner and I to communicate a variety of different cues (such as emotional tone, attitude, or formality) in our messages (3)	❍	❍	❍	❍	❍
Video-chat allows my communication partner and I to use rich and varied language in our messages (4)	❍	❍	❍	❍	❍

Q35 Finally, please tell me a bit about yourself.

What is your gender?
- ❍ Female (1)
- ❍ Male (2)
- ❍ Other (3)

Q36 What is your race?
- ❍ Black/African-American (1)
- ❍ White/Caucasian (2)
- ❍ Native American (3)
- ❍ Pacific Islander (4)
- ❍ Asian/Asian-American (5)
- ❍ Hispanic (6)
- ❍ Latino (7)
- ❍ Other (8)

Q37 How would you describe your current job?
- ❍ Professional/office (1)
- ❍ Non-profit (2)
- ❍ Education (3)
- ❍ Education (4)
- ❍ Healthcare (5)
- ❍ Food Service (6)
- ❍ Retail (7)
- ❍ Marketing/Communications (8)
- ❍ Family-owned business (where your supervisor is a family member) (9)
- ❍ Other (10)

APPENDIX B

DEMOGRAPHIC DATA

Work Schedule

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Full-time	16	4.2	4.2	4.2
	Part-time	118	30.9	30.9	35.1
	Do not currently work full-time, but have worked full-time in the past	30	7.9	7.9	42.9
	Do not currently work part-time, but have worked at least part-time in the past	122	31.9	31.9	74.9
	Hold an unpaid internship, and am not a paid employee	2	.5	.5	75.4
	Hold a paid internship	5	1.3	1.3	76.7
	Do volunteer work, and do not do paid work	13	3.4	3.4	80.1
	Do not work	76	19.9	19.9	100.0
	Total	382	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18	98	25.7	25.7	25.7
	19	152	39.8	39.8	65.4
	20	83	21.7	21.7	87.2
	21	31	8.1	8.1	95.3
	22	6	1.6	1.6	96.9
	23	7	1.8	1.8	98.7
	24	1	.3	.3	99.0
	25	1	.3	.3	99.2
	26	2	.5	.5	99.7
	27	1	.3	.3	100.0
	Total	382	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	239	62.6	62.6	62.6
	Male	140	36.6	36.6	99.2
	Other	3	.8	.8	100.0
	Total	382	100.0	100.0	

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black/African-American	42	11.0	11.0	11.0
	White/Caucasian	286	74.9	74.9	85.9
	Pacific Islander	4	1.0	1.0	86.9
	Asian/Asian-American	16	4.2	4.2	91.1
	Hispanic	9	2.4	2.4	93.5
	Latino	4	1.0	1.0	94.5
	Other	21	5.5	5.5	100.0
	Total	382	100.0	100.0	

Job Description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Professional/office	24	6.3	6.3	6.3
	Non-profit	20	5.2	5.2	11.5
	Education	21	5.5	5.5	17.1
	Healthcare	9	2.4	2.4	19.4
	Food Service	51	13.4	13.4	32.8
	Retail	60	15.7	15.7	48.6
	Marketing/Communications	15	3.9	3.9	52.5
	Family-owned business (where your supervisor is a family member)	15	3.9	3.9	56.4
	Other	166	43.5	43.6	100.0
	Total	381	99.7	100.0	
Missing	System	1	.3		
Total		382	100.0		

APPENDIX C

RELIABILITY ANALYSIS FOR PRODUCTIVE/COUNTER-PRODUCTIVE SCALES

Table 1. Descriptive Statistics for Productivity Scales

		F2F_Prod	Phone_Prod	Writ_Prod	Elec_Prod	Virtual_Prod
N		382	382	382	382	382
Range		4.00	4.00	4.00	4.00	4.00
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00
Mean		3.7634	3.0615	3.2232	3.2801	3.0380
		.04093	.03614	.03685	.03884	.04094
Std. Deviation		.80002	.70640	.72016	.75907	.80018
Variance		.640	.499	.519	.576	.640
Skewness		-.841	.082	-.148	-.123	-.213
		.125	.125	.125	.125	.125
Kurtosis	Statistic	1.675	.662	.546	.296	.461
	Std. Error	.249	.249	.249	.249	.249

Table 2. Descriptive Statistics for Counter-productive Scales

		Counter_F2F	Count_Phone	Count_Writ	Count_Elec	Count_Virtual
Statistic	N	382	382	382	382	382
	Range	4.00	4.00	4.00	4.00	4.00
	Minimum	1.00	1.00	1.00	1.00	1.00
	Maximum	5.00	5.00	5.00	5.00	5.00
	Mean	3.5167	3.6005	3.3668	3.4473	3.6495
	Std. Deviation	.95228	.82485	.82298	.81768	.82321
	Variance	.907	.680	.677	.669	.678
	Skewness	-.456	-.494	-.161	-.226	-.436
	Kurtosis	-.280	.185	-.117	-.135	.429
Std. Error	Mean	.04872	.04220	.04211	.04184	.04212
	Skewness	.125	.125	.125	.125	.125
	Kurtosis	.249	.249	.249	.249	.249

Table 3. Cronbach's alpha for productivity across channels

Channel	Cronbach's alpha
Face-to-face	.89
Telephone	.88
Electronic	.87
Written document	.89
Virtual	.92

Table 4. Cronbach's Alpha for Counter-Productivity Scales

Channel	Cronbach's alpha
Face-to-face	.95
Telephone	.93
Electronic	.93
Written document	.93
Virtual	.94

APPENDIX D

RANK ORDER TABLES: CHANNEL BY INFORMATION TYPE

Table 5. Mean ranking by channel and information type.

Information type	Channel	Mean
P&C	Face-to-face	4.3
R&P	Electronic	3.42
Training	Face-to-face	4.1
C&B	Face-to-face	3.61
Time Sensitive	Face-to-face	3.8

Table 6. Channel Rankings Private and Confidential

Channel Rankings: Private and Confidential

	N	Minimum	Maximum	Mean	Std. Deviation
P&C F2F	382	1.00	5.00	4.3010	1.35195
P&C Telephone	382	1.00	5.00	3.0812	1.05801
P&C Written Doc	382	1.00	5.00	2.6597	1.22288
P&C Electronic	382	1.00	5.00	2.6545	1.18431
P&C Virtual	382	1.00	5.00	2.3037	1.32488
Valid N (listwise)	382				

Table 7. Channel Rankings Routine and Procedural

Channel Rankings Routine and Procedural

	N	Minimum	Maximum	Mean	Std. Deviation
R&P F2F	382	1.00	5.00	3.2827	1.53136
R&P Telephone	382	1.00	5.00	2.6545	1.25741
R&P Written Doc	382	1.00	5.00	3.2304	1.32385
R&P Electronic	382	1.00	5.00	3.4215	1.31730
R&P Virtual	382	1.00	5.00	2.4110	1.35398
Valid N (listwise)	382				

Table 8. Channel Rankings Training

Channel Rankings Training

	N	Minimum	Maximum	Mean	Std. Deviation
Training F2F	382	1.00	5.00	4.0864	1.41806
Training Telephone	382	1.00	5.00	2.3874	1.29673
Training Written Doc	382	1.00	5.00	2.9869	1.18492
Training Electronic	382	1.00	5.00	2.8351	1.17119
Training Virtual	382	1.00	5.00	2.7042	1.37237
Valid N (listwise)	382				

Table 9. Channel Rankings Compensation and Benefits

Channel Rankings Compensation and Benefits

	N	Minimum	Maximum	Mean	Std. Deviation
C&B F2F	382	1.00	5.00	3.6099	1.46784
C&B Telephone	382	1.00	5.00	2.6204	1.22952
C&B Written doc	382	1.00	5.00	3.3979	1.33745
C&B Electronic	382	1.00	5.00	3.0262	1.23567
C&B Virtual	382	1.00	5.00	2.3455	1.39213
Valid N (listwise)	382				

Table 10. Channel Rankings Time Sensitive

Channel Rankings Time Sensitive

	N	Minimum	Maximum	Mean	Std. Deviation
Time Sensitive F2F	382	1.00	5.00	3.7644	1.48022
Time Sensitive Telephone	382	1.00	5.00	3.2906	1.23461
Time Sensitive Written Doc	382	1.00	5.00	2.3613	1.21035
Time Sensitive Electronic	382	1.00	5.00	3.1990	1.22408
Time Sensitive Virtual	382	1.00	5.00	2.3848	1.35974
Valid N (listwise)	382				

VITA

Whitney Lauren Tipton was born in Jefferson City, Tennessee, to Amy and Scott Tipton. After graduating from Jefferson County High School, she attended Carson-Newman University. At Carson-Newman, Whitney majored in Spanish and minored in Economics and Theology. She graduated in 2011 with a Bachelor of Arts with Honors, and completed an undergraduate honors thesis about religious pluralism in post-Franco Spain, under the guidance of Dr. Mary Baldridge. After working for a year, Whitney was recruited to coach forensics (speech and debate) and teach public speaking at the University of West Florida. She received her Master of Arts in Strategic Communication and Leadership, summa cum laude, in 2014. Following her M.A., Whitney received an assistantship to attend the University of Tennessee's Doctor of Philosophy program in the College of Communication and Information. While at the University of Tennessee, Whitney taught a wide range of courses, and completed additional training in communication pedagogy through the Tennessee Teaching and Learning Center. Whitney completed her Ph.D. in Communication and Information Studies, with a concentration in Organizational Communication and a cognate in Research Methods, in August of 2017.