

Stories of technology in the workplace

A narrative analysis of non-digital native family and friends for intergenerational collaboration and understanding in a digitizing world.

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Prologue

This thesis topic unknowingly began when I was twelve and started actively writing in diaries. It was then that I began to discover the power of stories. Not only documenting them, but processing them. I felt different once I had gotten the stories out of my head. To experience, almost as if in the 3rd person, how I was defining and developing my identity.

Next, I worked on this thesis topic as a Human Development major; an interdisciplinary look at life phases and how we as humans give meaning to them. This academic background primed me to think about identity, generations, generativity, and the human life course. Then during a job in college, I helped facilitate the transition from physical to electronic files and truly could not understand why some employees continued to insist on working with printed documentation. I couldn't empathize with why they would not want to change.

The 150+ hours of training in counseling and mediation taught me what it felt like to really hold space for someone to be able to tell their story, that you *can* add value without giving advice, and the powerful impact of simple acts of validation. At the beginning of this masters we were asked to write a paper on our vision with regard to Change Management. I knew my answer right away, empathy. In a nutshell, change is complicated. There are lots of different theories and ways to go about it. But take all those options and cover them with a blanket of empathy and you'll increase your chances of success. That empathy is that I believe will be the backbone of successful transitions into digitization on the work floor.

All of these things, and more, came together when I began working at a startup focused on improving analytical skills thru the use of Microsoft Excel. I am grateful that God brought me to that place when he did for it allowed me to put all of these pieces together into the work you see before you today. A work that may seem like it is about labels and groups, but it's not. It's about validating experience and the discovery that comes after. It is about what I learned when I truly listened to what my friends and family had to say about their relationship with technology.

Sincerely,
Simone

Thank You

Those who know me know that I was hesitant to take on this thesis. I wasn't convinced that it was "relevant" to my future; I thought that it was an outdated academic exercise. I was wrong. My teacher and advisers of the USBO at Utrecht University allowed me to be wrong by giving me the room and support to make this project my own. They encouraged me and challenged me to step outside my comfort zone. For that I would like to thank them all. Evelien Vink, Noortje van Amsterdam, Peter Linden, Jeroen Vermeulen, and Maikel Waardenburg.

I am in debt to my friends and family who participated in this research. I recognize the time and energy that it cost them and I am so grateful for their sacrifice. Your love and support was felt and appreciated.

Lastly, I would like to thank God for leading me on this most unpredictable of journeys. I never could have imagined all that I would be given in this past year.

Thank you all,
Simone

Contents

On this page you will notice that each section title is only one word. Simple. Concise. Or is it oversimplified? Misleading? The assumption is often that the contents page is like a cheat sheet; a quick look into what is to come. I offer you no cheat sheet for I feel that we fail to offer it to one another. We don't take the time to give context, we give labels. "Simple" and "concise" labels that are supposedly enough to understand another human being's unique experience. I don't think it's enough. I don't think this Table of Contents is enough. Do you?

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Disclaimer

Dear Reader,

This is not a How-To manual for integrating Baby Boomers into a digital workplace.

This is not an analysis of successful vs. unsuccessful employees.

This could never be a perfectly representative example of each person's unique experience.

This probably isn't even a fully accurate portrayal of these 16-people's experience.

.....

This is a journey into identity in the context of unavoidable change.

This is a self-reflection of the role that I and my generation play in the shaping of the experiences of others.

This is hopefully a spark to ignite a fire of and for communication and relationships.

Sure, "What you don't know can't hurt you," but then you also miss out on the chance to learn from, improve upon, and build on it.

This is me, asking you, to ask the real questions.

Good luck!

Introduction

What is the best way to get colleagues to bond? Complaining about other colleagues. Why? Because we often don't understand each other, but think that we can. We think that we can look down on them from our high horse and say what is what. So that happens when we get down from that horse, look them in the eye, and instead actually ask? What happens if instead of mocking the Baby Boomer for not knowing where to find the Dropbox folder we actually took the time to listen to each other's stories? What would your company look like if you asked instead of assumed what people were thinking?

As the color of this very text would imply, we are here to talk about change. Change from white to gray. Change in the span of just one short line of text. Change in the span of one person's lifetime, their career. Change that can be hard to read and makes us uncomfortable. Change that doesn't always know exactly where to start, and because of that leads to confusion and misunderstanding.

The world is headed on a collision course of three global trends: digitization, an aging population, and an increasing retirement age. What's more, society has experienced such a rapid increase in the use and dissemination of digital technology that many believe there is no going back (Prensky, 2001). Those born and raised before this revolution, 1980, have come to be known as non-digital natives (NDN), those who were not raised with or do not feel comfortable working with technology and digital devices (Prensky, 2001). This group is not to be underestimated; 39% of the world population (USCB, 2017) can currently be classified as a NDN. The argument here is not simply one of information accessibility and the internet. The concern is that digitization, the aging population, and later retirement set the stage for prolonged participation of NDNs in the traditional workforce. So if it is truly so inevitable that our world is headed in this techno-formed direction, what does that mean for our workers? What does that mean for the change in work for millions of people for whom technology is not as intuitive and who have experienced a dramatic shift in the nature of work over the last decades? How do these NDNs experience digitization and what is their relationship with technology in the workplace?

Since 1990 there are many researchers who have been aware of these colliding trends and engaging with this subject matter. The clique narrative is they "can't", they don't "want" to, and thus we need to find the best way to make sure they come along in this transition. The number of articles published relating to the use of computers by older adults increased from less than 10 to more than 70 per year between 1990 and 2010 (Wagner, Hassanein, & Head, 2010). Yet somehow the predominate question, "How can we best and mostly quickly train an aging workforce?", gets asked from a largely positivistic and quantitative perspective (Wagner et. al., 2010). This approach juxtaposing digital natives and non-digital natives, assumes the starting point to be thinking of aging as a problem that must be fixed or evaded. But I think we missed a step. I am much more interested in sharing with you the experience of what it is like to in the span of a single person's career go from typewriter to Dropbox, letters to Skype, or from 9-to-5 to 24/7 reachability. By asking these questions the hope is to create awareness and empathy within the digital native (DN) community for the experience of the NDNs. To validate their unique identity and strengths, rather than to label them as inferior, or behind the times. The aim is thus to expand upon the current, largely positivist, academic body of knowledge.

As a qualitative study the focus here is not only on measurable events and behavior, but on how respondents make sense of these events and give meaning to them. The focus on meaning and lived experience lends itself to the interpretive approach of social science (Maxwell, 1996). Interpretive methods of research work from the assumption that our knowledge of reality is socially constructed by human actors (Walsham, 1993). This research is intended to be more realist than instrumentalist as "the real interest is in how participants make sense of what happened, and how this perspective informs their actions, rather than in determining precisely what happened or what they did" (Maxwell, 1996, p. 74). For this reason, I will utilize storytelling as my research method to best authentically relay the respondents experience. By using stories to place the data in context of the life of the respondents, I hope to show readers a piece of the experience of the NDN and thus their reality. Intellectually, the objective is to gain an understanding of an alternate view-point. To give a voice to the NDNs in the workforce today. By focusing on perspective and lived experience, I hope to inform the community about how the relationship NDNs have with technology affects them in the workplace.

The question is, what happens if we don't simply label technology as the "solution" and NDNs as the "problem"? What if we instead take the time to understand, and empathize with the NDN experience in an effort to facilitate better understanding and collaboration on the work floor between generations? This is an issue that touches many more people than we realize at first glance. It is not simply about those who may struggle. It is about their supervisors, their direct reports, their coworkers, the customers they serve, and the new employees they train. Given this element of relationality, the effect of the relationship between the digital native and the non-digital native, I chose to interview my own friends and family in an effort to experience for myself the effects of engaging in these conversations. My parents are of the Baby Boomer generation which falls within the NDN cohort. All of my aunts and uncles, the parents of my friends, and many of the adults in my life do as well. So I asked myself, what would it feel like for me to sit down and really listen to what this digital transition has been like for the NDNs in my life whom I care about? What relevant information could I learn, which I could then take with me into the workplace to better understand, empathize with, and collaborate with NDNs in my own career?

Despite all the research done, and attention given to this topic in academia and the media, qualitative studies that focus on the lived experience of older workers are still few and far between. I don't want to ignore the fact that there is, or may be, an actual "problem" in the traditional sense for which there is a solution to be found. I am not claiming to be the alternative to that search. My goal is to complement the positivist research on the topic by asking the question: **What experiences do the non-digital natives in my life have of their relationship with technology in the workplace?** This research is oriented to be able to better understand the experience of non-digital natives in a work context when confronted with the trends of digitization, an aging population, and an increasing retirement age. The circumstance and effects thereof are objectively visible and measurable. However, the internal experience and processing of individuals is not. The extent to which NDN employees are able to embrace these new trends will determine a company's ability to capitalize on them. In this thesis I will argue that despite the view that NDNs are technologically inferior, there is still a lot that we can learn from them because each person's story is relevant, unique, and powerful.

This research has been placed in a framework of related scholars; some directly related to technology and digitization, but largely not as the emphasis here is not directly the technology itself. The scholars presented have been organized into five themes for the analysis: society, generativity, barriers, emotions, and identity. **Society** relates to the three colliding trends as discussed. **Generativity** relates to the intergenerational transfer of knowledge, life-course transitions, and feelings of usefulness (Sanders, O'Sullivan, DeBurra, & Fedner, 2013; Elder, 1995; McMullin & Dryburgh, 2011). **Barriers** are the more traditional barriers to acquisition as researched in preceding literature, plus theories of learned helplessness and computer self-efficacy (Birdi & Zapf, 1997; Saunders, 2004; Turner, Turner, & Van de Walle, 2007; Compeau & Higgins, 1995). **Emotions**, emotions at work, and managing emotions at work are then the result of these circumstances (Poggi & Germani, 2003; Morris & Feldman, 1997; Weiss & Cropanzano, 1996; Basch & Fisher, 1998). Lastly **identity** refers to the individual response to these changes and the identity work employees engage in to correlate their social-identities with their self-identities in a changing work environment (DeJordy, 2008; Watson, 2008). This "work" is expressed by the respondents in how they present their narratives.

No one I talked to said that they are actively anti-technology. No one has said that they don't see the value, or that they think that it is bad. It is more about what they want to do with it, and how they want to experience it. Everyone recognizes that technology saves time and that it is powerful, yet we still often have a technophobic image of this generation when in reality they are simply reacting to different life-course transitions, overcoming different barriers, experiencing different emotions, and doing different identity work in an effort to manage these changes in their own unique way. And often my generation is not even aware of the fact that these differences exist. The goal of this study is not to scare people into using technology they don't understand. The hope is to create a starting point through which colleagues can better empathize with each other's perspective while also empowering NDNs in their agency with technology at work. It is not simply a matter of the collision of these trends, it is the speed of this collision that peaks my interest. Technology is evolving at an exponential rate. Thus, the next 5-15 years will be critical to framing how we embrace this change in the nature of work and reevaluate our notions of progress. I care because I believe that it is imperative that we humanize and validate the experience that NDNs have with technology; not only see it as a problem to be solved.

Framework

This research takes place in two spheres of influence, the current state of our society and the academic theory of previous scholars. In this chapter I will clarify the ways in which my research was shaped by both. First, societal trends as mentioned in the introduction including digitization, an aging population, and a later retirement age. Second theoretically by the research and methodology of the numerous scholars who have addressed relevant topics.

Societal

The term **digitization** refers to the process of converting data to a digital form for use in a computer, and it has been rapidly developing and changing our society in the last 30+ years (Kominski & Newburger, 1999). What filled entire buildings in the 1950's, costing millions of dollars, was reduced to the size of a single computer chip, manufactured for a few dollars, by the late 1980's (Kominski & Newburger, 1999). Technology has transitioned from an organizational to a personal level with seeming ubiquity across society. Since 1984, questions related to computers and

computer ownership have been asked as part of the Current Population Survey done each month by the U.S. Census Bureau (USCB). The percentage of individuals accessing a computer started at 7.9 percent in 1984, increased to 36.6 percent in 1997, and is now at a high with 83.8 percent of U.S. households reporting computer ownership (USCB, 2017). However, it is not just computers. Society and work is being influenced by a variety of digital formats including, but not limited to, cell phones, pagers, tables, wearable technologies, etc. In 2016, Cloud storage provider Dropbox and Ipsos Mori, a London-based market research firm, surveyed more than 4,000 information workers in the U.S. and Europe about their use of technology in the workplace and found that people use on average 4.7 unique forms of technology per week (Patrizio, 2016). This data supports a marked, and likely irreversible, trend in our use and dependence on technology in our personal and work environments. We now live in a world where companies like Instagram can reach 130 million customers and be sold to Facebook for over USD1 billion while only having 15 employees (Brynjolfsson & McAfee, 2014). This would never have been imaginable, let alone possible, even 20 years ago. Digitization is thus the context in which the nature of work is changing. Few, if no, industries have not been touched by the promises of the revolutionary improvements digitization will bring. However, there are implications. For example, for employees who feel that they have been doing things just fine, the change in work procedure might feel unwelcome, oppressive, or unnecessary. Someone who has been working in a job for a long period of time forms certain ideas and habits, reinforced by experience and success. Introduce a new piece of technology, or any new practice for that matter, and the employee will see this as a problem to be solved (Salkowitz, 2008). The complicating factor is thus the issue of perspective.

Perspective on technology comes down to experience. Who learned what when? As stated, Prensky (2001) coined the terms digital native (DN) and digital immigrant in his definitive paper on generational differences in how we relate to technology. Prensky refers to it as a “singularity,” an event which changes things so fundamentally that there is absolutely no going back. This so-called “singularity” is the arrival and rapid dissemination of digital technology in the last decades of the twentieth century (Prensky, 2001). Prensky himself did not specify a year, however, the general consensus now is that the term digital native applies to children born after 1980. I will use non-digital native (NDN) here, as opposed to immigrant. This decision reflects that of many authors in the subsequent literature, and is due in

part to the connotation of the word native as it relates to the native speaker of a language. Such an analogy with language helps to distinguish NDN as a trait rather than a skill that was or was not acquired. What's more, Prensky speaks of the "digital immigrant accent" which can be seen in such things as turning to the Internet for information second rather than first, reading the manual for a program rather than assuming that the program itself will teach us to use it, printing out a document to edit it rather than editing it on the screen, or the "did you get my email?" phone call (Prensky, 2001, p. 3). These examples speak to the label of NDN as being distinct from being technological apt. An individual can be very skilled with technology, yet still not be a native intuitive user. Youth and "digital natives" are often taken as the measuring stick against which the NDN experience is compared. NDNs are only "keeping up" if they are keeping up with the DNs. How can this be a fair comparison when studies show that being raised with technology literally rewires our brain (Cavanaugh, Giapponi, & Golden, 2015)?

This divergence between digital native and non-digital native is becoming more evident given the socio-cultural phenomenon of the **increasing average age** of our population. While the details and implications of this societal trend will not be discussed in detail here, the statistics are clear. 65 to 80-year-olds is the fastest growing group in the Dutch population (CBS, 2017). This "gray-ing" as the Dutch term "vergrijzing" so pointedly describes it, is a reality which will affect many different parts of our society. One such example is the concept of retirement, specifically the **increasing retirement age**. Historically, statistics show there to be a dramatic decrease in labor participation between the age of 60 and 65 (CBS, 2017). However, this traditional end to labor participation is expected to be extended as people live longer, social benefits are being dispersed at later ages, and for many there is an economic need to remain in the workforce for a protracted period. Given the work context on this study and the definition of NDN, the cohort addressed here is those of working age, 18, in 1980 and thus roughly 55+ years-of-age today. This coincides with the US Department of Labor who considers an older worker to be someone age 55 years or older (CDC, 2012). And these "older workers" are staying in the work force longer. The percentage of workers still working full time at the age of 65 has been increasing from 44% to 56% in the United States (CDC, 2012). Assuming a retirement age of 67, as it will be in the Netherlands by 2021, that leaves 791,000 people worldwide in this gap of being a NDN and still of working age (USCS, 2017).

Theoretical

In the context of digitization and the demographic changes in our society, it follows to think about what these changes mean for individuals and their knowledge. This human angle relates to the concept of **generativity**, the human desire to contribute to society, in this case the work environment (Sanders, O'Sullivan, DeBurra, & Fedner, 2013). Generativity has been considered critical to older adult development for maintaining feelings of productivity, avoiding stagnation, and passing along a life legacy. Generative experiences have historically occurred through work, family, and community experiences. However, recent studies suggest that differences in intergenerational communication and the high value placed on technology may be devaluing traditional generative experiences (de St. Aubin, McAdams, & Kim, 2003 in Sanders et al., 2013, p.191). In fact, de St. Aubin et al. describe it as a "generativity crisis" in which the entire process of generativity may be in transition. Skill obsolescence is particularly likely to affect older workers, as they have experienced a high pace of technological change in the course of their careers (Karpinska, 2015). Thus, it is important to give consideration to how these changes are affecting feelings of generativity for older workers.

Placing the data in the context of each participant's life experience relates to the life-course perspective theory, and the corresponding **life-course transitions**. According to Elder (1995), the life-course perspective guides the identification of research problems and research designs by making "time, context, and process more salient dimensions of theory and analysis" (p. 104). Subsequently, life-course transitions reflect the timing and sequencing of lives and typically involves a change in status (McMullin & Dryburgh, 2011). In this context, the relevant transitions include start and (anticipated) end year of employment as correlated with particular technological developments. For example, at what point in their career was a given participant when email became a common form of workplace communication? The effect of these transitions can be influenced by the age at which a worker is considered "old" depending on the age structure of the occupation or industry. **Workplace culture** is a frequently referenced complementary concept referring to "a shared system of practices, knowledge, traditions, attitudes, and values that workers use to manage and understand their daily interactions" (McMullin & Dryburgh, 2011, p. 12). Thus culture, national or organization, can affect the lens through which these life-course transitions are

seen by the individual themselves and others in their environment. Computing technology, and the ability of older workers to adapt to it, have comprised a significant component of ageist assumptions. Research has shown that older workers are generally characterized as less technologically adept and less interested in new technologies (McMullin & Dryburgh, 2011). This aspect of adeptness leads to a large body of theoretical work focused around conceptualizing, measuring, and strategies for overcoming obstacles older computer users face; Festervand and Meinert (1994), Birdi and Zapf (1997), and Saunders (2004) are five such scholars.

Their relevance bolstered by their inclusion in the often cited seminal work by Wagner, Hassanein, and Head in 2010, each of these three qualitative studies aims to address the causes and effects of **barriers** experienced by older computer users. The pioneering work of the three, Festervand and Meinert (1994), sets the stage with a more neutral intention to “examine older adults’ attitudes toward personal computers in general” (1994, p. 13). Subsequently, both Birdi and Zapf (1997) and Saunders (2004) clearly position their work under the assumption that older computer users experience greater difficulty with technology and with the intentionality to identify strategies to mitigate those obstacles. Saunders ends his work with a series of recommendations for maximizing computer use, implying a strong presumption of the importance and impact of external factors. Birdi and Zapf however, stress the emotional response of their participants when faced with a computer error. The marked difference in tone and objective is relevant as it speaks to the predicating assumptions of the works.

For this reason, it is not surprising that Turner, Turner, and Van de Walle (2007) as the most recent of the four qualitative studies addressed by Wagner et al. takes a position more focused on human experience. During the course of their research an unexpected perspective emerged, namely, “how the participants themselves accounted for their experiences and in doing so attributed causation” (p. 287). These **attribution theories**, “the way in which we select and use information to make judgements about our own behavior and the behavior of others” (p. 288), led them to the conclusion that that older people experienced learned helplessness manifested in the three dimensions of **explanatory style**; internality-externality, stability-instability, and globality-specificity (Turner et al., 2007). In their results, **learned helplessness** was shown to be manifested by the participants in one of

seven ways; (1) alienation (‘This is not my world at all’), (2) identity (‘I worked in a job with people, not with machines’), (3) agency (‘But sometimes you’re obliged to’), (4) anxiety (‘I was frightened to’), (5) age related (‘being too old’), (6) being too busy (‘You haven’t got a space in the day to learn’), and (7) finding a purpose for the technology (‘I see their uses but I don’t have to accept them fully’). This personal and subjective lens of experience with digital technologies relates also to the more goal-oriented concept of **computer self-efficacy** (CSE). CSE is defined as a “judgment of one’s capability to use a computer” (Compeau & Higgins, 1995, p. 192) and thus focuses on users’ beliefs regarding their own abilities. The study of CSE from the perspective of behavior and intention is an important distinction as it shows a more humanistic rather than techno-centric model (Saleem, Beaudry, & Croteau, 2011).

In this context of learned helplessness and a depressed view of computer self-efficacy in a work environment fraught with technology, older workers are left to cope, and often to hide. While literature about stigmatized social identities often encourages a culture of “coming-out,” in reality “many individuals with **invisible stigmatized social identities** consciously and deliberately decide not to reveal them in organizational settings” (DeJordy, 2008, p. 504). DeJordy (2008) shows how the consequences of the decision to pass in an organizational context, particularly the unintended consequences of that decision, can lead to mediators of lowered self-verification leading to (1) disengagement from the social context, (2) self regulation and heightened situational awareness, which deplete cognitive and intrapsychic resources, and (3) cognitive dissonance potentially leading to an altered perception of the organizational setting. However, DeJordy does not explicitly make reference to technology or NDNs as a potential social identity. Thus, part of the exploration here will be a comparison of her work with the experience of the respondents presented. DeJordy utilizes Tajfel’s (1973) definition that “social identity will be understood as that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership” (Tajfel, 1973 in DeJordy, 2008, p. 63). Given the congruence of increased digitization and the life-span of the Baby Boomer generation, the argument here is that the distinction of the group is clearly supported by society and common knowledge. It is important to mention that while age is visible, the invisible aspect implied here is computer self-efficacy, thus differentiating this argument from traditional ageism. While DeJordy focused

on intended and unintended consequences of passing, others look to the legalities of protecting invisible identities (Beatty and Kirby, 2006) or the explicit techniques used by individuals to manage their invisible identities (Clair, Beatty, & MacLean, 2005). Clair et al. (2005) discuss how both contextual conditions and individual differences can influence a person's conscious decision to "pass" vs "reveal" their identity. The four motives addressed for this decision are: (1) maintaining self-esteem and coping, (2) building or preserving relationships, (3) arranging accommodation, and (4) creating social change (Clair et al, 2005). If/when individuals do choose to reveal their invisible identity, Clair et al. discusses the possible positive impact on group performance. It is suggested that increased diversity improves group performance through enhanced information networks and more and varied perspectives on the world that allow for increased creativity and innovation (Williams and O'Reilly, 1998 in Clair et al., 2005).

Events in the workplace, coupled with the actions of colleagues, can lead to the situations as discussed regarding how the individual chooses to present their invisible stigmatized social identity. However, this is but one example of a larger picture examining the effects of workplace events on the psychological state of employees and their affective reactions. **Affective Events Theory** proposes that organizational events are proximal causes of affective reactions. "Things happen to people in work settings and people often react emotionally to these events. These affective experiences have direct influence on behaviors and attitudes" (Weiss & Cropanzano, 1996, p. 11 in Basch & Fisher, 1998). Additional related theory such as **cognitive appraisal theory**, adds the perspective that the appraisal, evaluation, and interpretation of events, as opposed to purely the event in and of itself, determines an individual's emotional experience (Roseman, Spindel, & Jose, 1990 in Basch & Fisher, 1998). Thus, the definition posited by Basch and Fisher (1998) of an Affective Event is "an incident that stimulates appraisal of and emotional reaction to a transitory or ongoing job related agent, object of occurrence" (p. 3). Interestingly however, their results showed that the same type of work event did not always trigger identical emotions in all respondents. Different respondents appraised the same category of events differently thus leading to distinct emotions. Some emotions were more consistent and thus easier to predict such as mistakes leading to feelings of embarrassment of having influence leading to feelings of power. Basch and Fisher indicate a hope that their findings can be used

by management to create more emotionally positive and conducive work environments leading to better service and less burnout.

Additionally, the decision of the individual to "pass" or "come-out" in this way also has implications for their internal psychological state. These emotional reactions of employees should not be underestimated, as stated by Poggi and Germani (2003) in their paper on **emotion at work** where they shed light on the often less studied qualities of the emotions that people feel at work such as "the causal relationships between workplace, job, status and the emotions felt; the link of emotions to a person's motivation, social relationships, cognitive and professional performance, and to the possible arising of stress, burn-out and mobbing" (Poggi & Germani, 2003, p. 461). Based on the theoretical model of Castelfranchi (1988; 2000), Poggi and Germani detail how emotions are a complex subjective state interconnected with the systems goals and the individual's evaluation thereof. Four types of emotions are deemed; (1) Individual Emotions – includes primary emotions such as joy, anger, sadness and their "families", (2) Cognitive Emotions - ones felt about knowledge or knowledge acquisition: interest, curiosity, surprise, boredom, (3) Attachment Emotions – emotions, like love and hatred, sympathy and dislike, are felt when we have the goal of staying near or far from some person, or of doing something for or against them, and (4) Self-Image emotions – a class that monitors the goals of Image and Self-Image: shame, guilt, embarrassment, pride, satisfaction (Poggi & Germani, 2003, p. 462). It is also recognized that there are other emotions outside of these four categories, or that emotions may not fall easily into one of the other as different "ingredients" of an emotion may lead to different conclusions. They found more than half of the emotions felt and shown at work to stem from social relationships not only the work itself.

This interpersonal element leads us to the conclusion that emotions do not simply happen, they are influenced. This influence is exhibited by the individual by the way in which they go about **managing emotions in the workplace**. In a 1997 paper by that name, Morris and Feldman discuss how displaying organizationally-sanctioned emotions has been argued to be a form of "labor" since it requires effort, planning, anticipation, and adjustment to situational factors in order to publicly display emotions that employees may not necessarily privately feel (James, 1989 in Morris & Feldman, 1997). This emotion labor can have consequences on things such as emotional exhaustion, job satisfaction, and role internalization. In

the context of a digitizing workplace where job responsibilities are in flux, the concept of role is important. Role Internalization refers to the extent to which individuals incorporate organizational demands into their true or real identity (O'Reilly and Chatman, 1986 in Morris & Feldman, 1997). Over time, workers will either have to internalize the role demands to survive on the job or leave the organization altogether. How employees address this juxtaposition related to how they choose to manage their identity and the identity work that they carry out.

Watson (2008) examined this dilemma looking to understand how their personal predicaments relate to the broader structures and historical circumstances in which they arise. This was originally argued by Wright Mills (1970, originally 1959) with his concept of the **sociological imagination**. Watson's standpoint is that work organizations are a particularly appropriate setting for the deployment of the sociological imagination and for "attempts to understand how, in modern times, people deal with questions of who they are and who they might become" (Watson, 2008, p. 122). Watson warns against reducing the analysis to purely what is happening within a person's mind, and thus the sociological imagination helps us set processes of individual identity work firmly in the structural or sociological context in which they occur. A three-step model is provided for understanding the work done by the individual to align these two spheres of influence. This **identity work** is thus the efforts taken by the individual to correlate social-identities with their self-identity (Watson, 2008). Individuals have the autonomy to interpret the roles given to them in the 'script' of the social-identity when working to mold their own self-identity. The growing body of empirical evidence continues to indicate how important it is to give full recognition to the active 'work' which people do on their identities. It is precisely because "there are so many diverse, competing and contradictory discursive pressures upon and resources available to every individual in the contemporary world" (Giddens, 1991 in Watson, 2008, p. 129) that engagement in identity work is unavoidable. However, the use of identity-making resources varies from person to person, from occupational group to occupational group. For some, the work they do is more central to who they take themselves to be while for others it is more peripheral (Watson, 2008). Yet all identity work is two sided, making connections 'outwards' to social others as well as 'inwards' towards the self. The outward actions of identity work are seen passively in daily interactions, plus explicitly when individuals are appealed upon to present themselves, as in a narrative setting.

Social scientists are not in agreement on the specific definition of what a **narrative event** is. Barbara Herrnstein Smith (1981) offered, for example, the simple though useful, "Someone telling someone else that something happened." However, such a definition fails to acknowledge the quality of narrativity, "an aspect that invites more or less direct narrative responses" (Hyvärinen, 2008, p. 448). Unfortunately, this new theoretical perspective was not easily reconciled with the more formal and structured methods of the past Labovian Model (Labov & Waletzky, 1967). This shift was indicative of a trend towards seeing that the point at which good stories are informative is when they are able to evoke a strong response in their reader. Narrative was thus adopted as a new way to theorize the too static conceptions of self and identity (Hyvärinen, 2008). In 1997 Mishler was one of the first to point to a key problem in the Labovian Model, namely, "its relative inattention to the interview context in the production of narratives" (Mishler, 1997, p. 71 in Hyvärinen, 2008). It is with this turn in narrative theory that I would like to associate my approach. The change from studying narratives as separate, complete and self-sufficient texts towards a study of narratives in context and interaction and the study of narrative practices with an emphasis on "narrative activity as sense-making process" (Ochs and Capps, 2001, p.15). Herman (2002) has offered an additional contrast to the Labovian Model by accounting for mental processes and considering the role of the experiencers as being on equal footing with the material presented by the speaker. This footing supports the inclusion here of presenting as relevant my reflections and responses to the stories.

Narratives are seen as bringing into the open, "rich, detailed, and often personal perspectives." Therefore, it may be easy to misunderstand narrative simply as a method, and narratives as resources with which to investigate the phenomena of which the narrator makes an account (Hyvärinen, 2008, p. 447). However, the narrative can be shown to have clear probative value. For example, the dynamic between speaker and listener can lead to what is known as **expectation analysis**. The speaker expects and wants to get a response from the listener. Thus, narrativity is more than a simple masturbatory exercise. The entire utterance is constructed, as it were, in anticipation of encountering this response (Bakhtin, 1986, in Hyvärinen, 2008). Deborah Tannen (1993) has summarized the following list of what she calls "evidence of expectation": (1) Repetition; especially repetition of whole utterances; (2) False starts; (3) Backtracks, breakingdown of the temporal

order of telling; (4) Hedges that flavour the relation between what was expected and what finally happened; indeed, just, anyway, however; (5) Negatives. As a rule negative is only used when its affirmative is expected (Labov, 1972, 380-381); (6) Contrastives; (7) Modals; (8) Evaluative language; (9) Evaluative verbs; (10) Intensifiers; including laughter. This list illustrates the ways in which narrative is accounting for and making relevant past futures and past expectations rather than just piecing together action sequences.

A more ambitious version of narrative analysis draws from the social constructionist notion that narratives already always are part of the constitution of the social, cultural, and political world (Bruner 1991; Gergen and Gergen, 1993). These notions motivate theoretical investigation on how narratives are constituted, what their place is in human life, who is entitled to tell them and when, how they are received, and how they work in the social world. "Narrative analysis is thus inseparable from concerns of the narrative constitution of selves, identities, and social realities" (Hyvärinen, 2008, p. 447). For these reasons, it can be accurately stated that the form and goals of this study fall well in line with the current changing tide in narrative analysis. The antiquated textual and structural models of analysis are being dislodged by more contextual approaches that focus on narrative practices and storytelling. Expectation analysis, among others, recognizes narratives as not only accounting past experience but positioning the speaker within a network of social and cultural expectations (Hyvärinen, 2008). It is within the context of this framework and corresponding theory that I place my research and the subsequent methodology.

Methodology

In this chapter I will discuss and explain the choices I have made during the execution of my research. I will illustrate five things: my approach to this research project, the criteria for selected respondents, execution of the collection of data, the analysis of collected data, and the reasons why I believe this method and the data is produced to be academically valid.

Approach

The approach used is predicated upon an interest in uncovering data about the lived experience of Non-Digital Natives and their relationship with technology in a work context. This interest led to the selection for qualitative research examining stories through storytelling.

I chose to implement qualitative research because preliminary literature review showed that this topic had predominantly been researched quantitatively in the past. As such, I felt that a qualitative approach would provide a fresh perspective

to the field. Additionally, qualitative research was better suited for my research goals as “qualitative research procedures assume that organization realities are not concrete, but are the projection of human imagination” (Morgan & Smircich, 1980 in Daft, 1983, p. 539). This space provided by qualitative research for human experience and sense-making was thus vital. Qualitative research is more concerned with “meaning rather than the measurement of organizational phenomena” (Daft, 1983, p. 539) allowing me to be flexible with the scope of my research and follow the themes which my participants showed me to be the most relevant. I was led by a colleague to consider storytelling and narratives. I subsequently agreed that it was the most relevant and productive form for the data I hoped to collect. Lieblich in her 1998 book *Narrative Research* talks about how narrative research can serve an exploratory purpose when not much is known about a topic or to identify researchable questions. As stated, there is much already known about the topic of aging and technology, however, largely quantitative and not from the first-person perspective. By utilizing storytelling, the hope is to better identify more specific areas for future research. Lieblich also discusses how narrativity is often juxtaposed with the typically flat contribution of positivistic methods; a fruitful approach given the context stated about the current state of related research.

Storytelling specifically has been a vital part of our collective memory and knowledge sharing for millennia. Atkinson (2007) eloquently stated, “We are a storytelling species. Storytelling is in our blood. We think in story form, speak in story form, and bring meaning to our lives through story. Our life stories connect us to our roots, give us direction, validate our own experience, and restore value to our lives. Life stories can fulfill important functions for us, and, as we recognize now more than ever everyone has a story to tell about his or her life, and they are important stories” (p. 224). Storytelling provides us with a unique perspective and information about a given situation. It allows for the listener to imagine themselves in the scene being painted by the teller. To evoke sights, smells, sounds, and emotions. Stories and their corresponding narrative explanations allow us to understand why people work and behave the way that they do (Polkinghorne, 1988).

If the goal is empathy and understanding then stories are the better way to get there than statistics and facts. “Convincing narratives have a kind of weight that

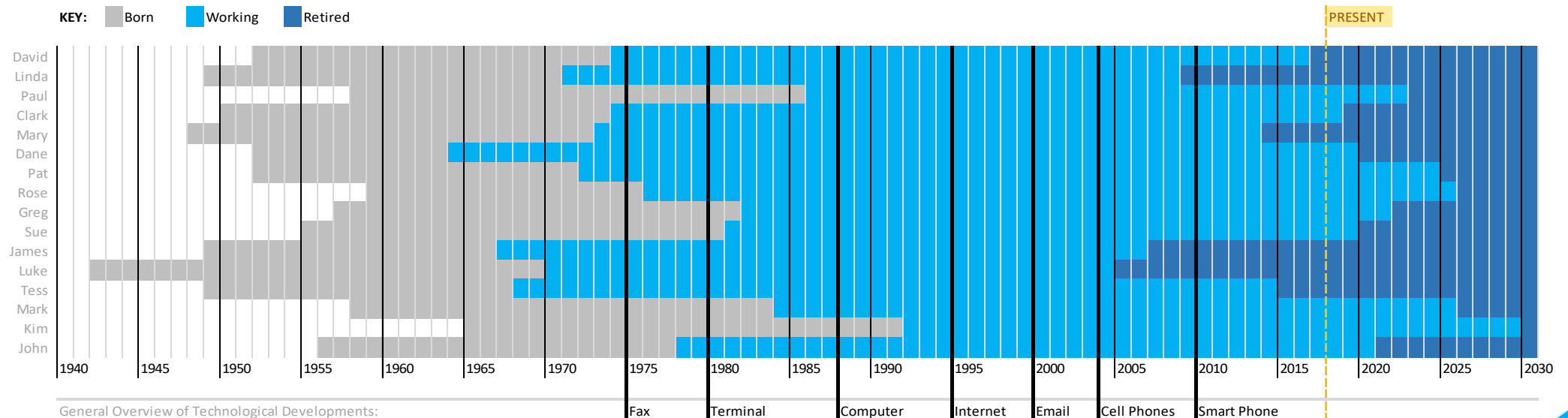
mathematical formulas do not” (Stephen Toulmin in Maynard-Moody & Musheno, 2003, p. 25). Just as a good autoethnography can encourage connection, empathy, and solidarity, I believe that storytelling is the most applicable and powerful way to cultivate empathy for NDNs in the workplace by understanding their unique relationships with technology.

Criteria

In determining selection criteria for my respondents, I was guided by Prensky’s definition of non-digital natives, those born after 1980. More specifically, as the context of this study is the work environment, the group I targeted for participation in this research was those who were of working age, 18, at that time. However, as 1980 is not a hard cut-off set by Prensky himself, I then broadened the scope to the colloquially understood “Baby Boomer” generation. While I considered the criteria that the respondents should still be working and not looking to retire in the immediate future, I discarded this limitation with the reasoning that individuals already in, or approaching, retirement still had relevant and valid stories to share about their relationship with technology.

Given the inter-generational component to my research and the interest in exploring the impact of not only sharing but also hearing these stories, I chose to include only respondents with whom I had a pre-existing relationship. In this way I could engage with them more authentically. Had I worked in an organization with colleagues in this generation I would have chosen to limit my scope to a purely work context, however this was not the case. Thus, I turned to family and friends. I was able to make this change because of the large number of potential participants in my network. The decision to limit my participants to family and friends allowed for deeper and more personal storytelling.

By choosing my respondents in this way I also placed myself in a central role in my research. My relationships with the respondents allowed me to examine my own personal response to hearing their stories in a way that I would not have experience with an unknown participant. I recognized that by interviewing these individuals I could include my own reflections and experience as the listener to explore the effect of hearing these stories on others. Thus, by being a participant in the personal relationship with my respondents I could reflect on an added dimension of the stories that I collect. This was a conscious decision as the goal of my study is to explore inter-generational empathy, understanding, and collaboration on the



work floor. There are valid potential adverse consequences of this change which will be explored in the following chapter on reflexivity.

The final group of participants numbered 16. They were born between 1943 and 1965 with an average age of 63. 7 women and 9 men were interviewed. 12 of the participants are my direct aunts and uncles, 1 second cousin, 1 personal friend, and 2 the parents of a personal friend. They have worked in a diverse set of fields including: education, healthcare, social work, human resources, consulting, banking, coaching, architecture, ICT, logistics, and business development. 6 of the participants are already retired with 10 still working. The names as seen in the graph above have been altered to protect respondent anonymity.

To demonstrate the technological changes these individuals experienced during their career the general overview of technological developments was added. Note that the emergence of any particular technology varies by industry and company. As such, the timing indicated is a generalization based on the dates quoted by the participants and general knowledge. The intention behind presenting the data in this way is to portray, in context, the technological developments experienced by the respondents and make more salient the recency of these changes. For example, the graph makes clear that some participants had already been in the workforce for 10 if not 20 years before the internet even started. This context is vital to correctly positioning the storied data in the experience of the individual speaker.

Collection

Participants of the criteria mentioned were approached by me personally and asked if they would be interested in participating in this research. The most present ethical concern, given the highly personal nature of stories as opposed to other more neutral types of data collection, is privacy and anonymity. The voluntary nature of participation is thus key. Given that all participants are family and friends, it is recognized that my personal relationship with the respondents may lead to situations where respondents feel unintended pressure to participate. Though none did, it was made clear that participation was voluntary, and that they had the prerogative to decline. The topic of the research was described to the participants as being about the “relationship that they had with technology in their work.”

Given the delicate nature of the storytelling practice, it is important that respondents feel comfortable and open to share their personal experiences. The aim was for a casual and relaxed interview setting. Each participant was given the opportunity to indicate a time and place which worked for them. For 13 of the 16 participants this was a sitting room in their own home, and for 3 it was their office, home of a family member, or coffee shop. For the 13 in-home interviews I had been to all of these locations, often many times, before thus contributing to a comfortable and familiar atmosphere. Participants were informed about consent, confidentiality, and asked for permission to record the conversation. Participants were then also informed, prior to the interview, that they would have the chance to read, edit/modify for clarity, and approve the transcript before it was used as data. Each interview lasted between 45 and 75 minutes.

During the introduction I explained my research method as being narrative and that as such I was looking for storied data. A challenge of storytelling is to extend the account beyond the first sentence. I explained that the interviews would not be a traditional format with an extensive list of specific questions, but that I will be looking for them to describe, in detail, stories related to their relationship with technology. I encouraged them to expand upon their answers with details about time, place, people, and events. To facilitate an open conversational atmosphere, I did not have a notepad with me, nor did I write anything down during the interviews. The original intention was to utilize semi-structured interviews. To this end a list of six questions were prepared, based on existing literature, and formulated in an effort to trigger storytelling.

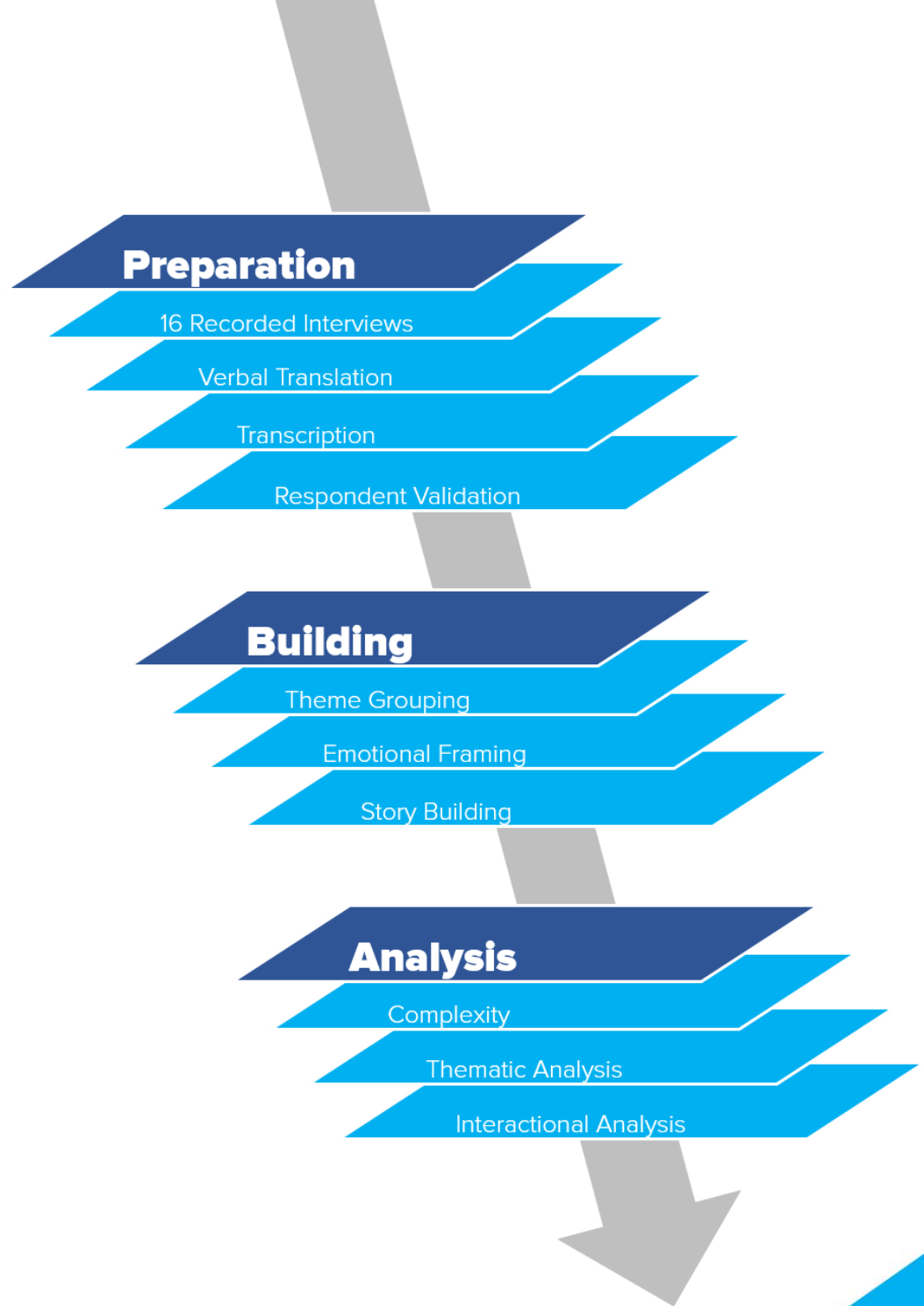
- Can you tell me about the first time you used a (type of tech) at work?
- Was there a moment when you realized that technology was going to change the nature of your work?
- What has been a memorable technological crisis at work?
- Can you tell me about the last time you followed a training for work related to technology?
- Has there been a time when technology led to a conflict between you and a colleague or supervisor?
- What is an important personal achievement related to your use of technology at work?

However, it quickly became clear that the complexity and variety of experience in the subject matter, did not lend itself to such a structured approach. By approaching the topics of each interview in a more flexible way I was able to follow the lead of the participant to the topics which, in their memory and experience, would be the most relevant. Each individual had their own unique order and style of how they came around to talking about different points. I thus utilized purposefully long pauses during each interview in an effort to give space to the participant to decide for themselves where to go next after a particular story had tapered off. This self-guided nature of the interviews allowed for the experiences that were most salient and charged to come to light. These elements allowed for a more authentic and valid telling of their personal histories.

An interesting and relevant cadence to the interviews however, was the back-and-forth between myself and the participants. In the reading of the transcripts by others it was confirmed to me that the questions which I was asked back by the participants were atypical. It can be assumed that this dynamic was aided by my relationship with the participants, yet it is noteworthy that I was often asked by the participants if I understood, agreed with, or what my experience was with a particular topic. This data was included and can be seen in the stories to follow. I believe that this dynamic of the data collection process supports the importance of relationality both between myself and the participants, but also for this topic as a whole. That connection and resonance between individuals is vital to being able to place and understand the stories which are shared.

Analysis

Narrative analysis is a technique by which we can interpret “the ways in which people perceive reality, make sense of their worlds, and perform social actions” (Phoenix Smith, & Sparkes, 2010, p. 5). However, we do not have direct access to these perceptions of reality. Instead, “because life comes to us in the form of stories, the analysis of narratives becomes a way of analyzing experience” (Riessmann, 1993). Phoenix et al. also showed how narrative analysis is discussed as a method for tackling complexity, a process epitomized by aging (Phoenix et al., 2010). It is this complexity that I have attempted to tackle in the following analysis of the storied data.



Preparation

As 15 of the 16 interviews were executed in Dutch, the first step was to translate each interview into English. This was done by listening to the recording with headphones and recording myself simultaneously speaking the English translation out-loud. There were four benefits to this method. First, I have experience working as a translator from Dutch to English speaking simultaneously during speeches and as such this method came naturally to me. Second, by speaking instead of writing the translation I was better able to maintain the storied and colloquial nature of the content as opposed to how it would have been translated if from text to text. Third, during the listening/recording sessions I myself was reflecting on the content of each interview and took the opportunity to interject, as notes into the English transcript, my own thoughts and observations. These observations are the basis of the notes you will see next to the stories and the beginnings of the ideation for the analysis chapter. Fourth, while a definitionally accurate translation, my spoken rendition was influenced by my own personal vernacular and linguistic patterns. This had the benefit of allowing for the subsequent translations to be more closely correlated in style and thus allowed for more fluid story building. During the translation, interview sections which were tangential or off topic to the subject of technology and work were not included. In cases where relevance was ambiguous the content was included. The English recordings were then transcribed, and the resulting transcripts were sent back to the respondent for confirmation of accuracy. This check was to ensure that the translation did not unduly modify the respondent's original intention and message. Each of the 15 participants approved their translation.

Building

As Maynard-Moody and Musheno (2003) discovered in their own telling of stories, taking pieces of the story out of the whole dissolves the connection with context in a way which hinders understanding of the core message. Thus, the story building process was undertaken with great appreciation and care for the original intent of the speakers. I believe that this was possible in part due to my relationships with the participants. The overall goal was not to analyze the structure of the story itself but to use the story as the vessel for transferring the experience to the reader in an effort to increase empathy and understanding for the experience of the NDN. However, it would be unrealistic and impractical to expect a reader to absorb each of the 16 different accounts. Thus the 16 transcripts were "built" into the four

stories represented here. Story building is a process with "the objective to make collective sense of individual stories" (Wilkins, 2000, p. 148). It results in a synthesized group story from the personal stories in such a way that all can relate to, and see their own experience reflected in, the resulting story (Wilkins, 2000). This process made it possible to address varying nuances of a given theme without requiring the reader to navigate through multiple accounts on the same topic. Story building also allowed for an added layer of anonymity for the participants by making less clear which stories and details came from which unique respondents. The following is the process by which the stories were built.

The 16 transcripts were first re-read and grouped by theme. Example, all story sections about email were cut and pasted together. This resulted in a document with 28 different themes and 13,139 of the 66,956 original words were not included due to being labeled as miscellaneous or not-relevant. It was clear that it would not be possible or prudent to expect to build the remaining 53,817 words into one representative story for all of the 16 individuals. Thus, based on the themes which emerged, the four types of workplace emotions as determined by Poggi and Germani (2003), and Watson's (2008) concept of identity work, I determined four emotions around which the four stories would be built. These emotional displays were deemed probative within the social constructionist lens of narrative analysis and the expectation of response the speakers seemed to be looking to elicit from me as the listener (Hyvärinen, 2008). The themes were clustered into like groups based on these four emotions with some themes appearing in multiple stories to correlate to the frequent mentioning by multiple participants. The built stories were also shared with the respondents for comment and approval.

Though the aim was to build the stories such that it was not noticeable to the reader where the breaks between original speakers lie, I recognize the importance of transparency in this matter. For that reason, the four stories in their original per participant color-coding can be found in the appendix. It should be noted that while the color-coding may convey that a certain segment of text is original from the indicated speaker, it is likely that the content was still built but from pieces of the same interview and thus not visible in the color-coding. This is to say that the visualization of the color-coding cannot fully portray the extent to which the stories were built.

Analysis

The four meta-stories were then the basis of the formal narrative analysis. This analysis can be done in the form of four different models of narrative analysis: thematic, structural, interactional, and performative (Riessman, 2005). The analysis performed on the built stories in this research was based predominantly on the ideas of interactional analysis. Thematic analysis, finding common thematic elements across participants and then organizing and representing narratives on the basis of those themes, can be seen in the method by which the stories were built. However, the subsequent process of reflecting upon the built data focused elsewhere. **Interactional analysis** is concerned with the dialogic process between teller and listener; how they jointly participate in the conversation and create meaning collaboratively (Riessman, 2005). This collaborative and reflective element was utilized in the analysis done when writing the margin notes found next to the stories, and the construction of subtopics which are the focus of the analysis chapter.

The final analysis presented to the reader is thus three-fold. First, the built stories themselves will be explored as a vessel for portraying the complexity of the NDN experience. Second, the meta-stories will be analyzed thematically based on the theoretical framework as laid out in the previous chapter. Third, the analysis of these stories through interactional narrative analysis. I acknowledge the highly subjective nature of this analysis. As such, the validity section here, and the chapter on reflexivity to follow, will expand upon the justifications for the trustworthiness of the data of my research.

Validity

As indicated under the criteria, the respondents interviewed cover a large spectrum in age, field, and experience. I am confident given literature reviewed on this topic, that this adequately covers the **diversity** of characteristics needed to explore the NDN experience. While some of the respondents are already retired, the stories collected span a considerable time range. Thus, retired or under-employed respondents were able to give equally relevant data about the technological development in question as those whom are still in the workforce today.

As stories that represent the subjective experience of individuals, the data itself cannot be labeled as “right” or “wrong”. However, it can be misinterpreted or misrepresented. As such, **respondent validation** was used to increase the accuracy with which the stories are portrayed. As stated in the analysis section, respondents reviewed the translated, transcribed, and abridged text before analysis and again after story building. It should be noted that the respondents were all exceptionally involved in the validation process. Compared to traditional standards for this type of research (Ruben, 2000), it is remarkable that all 16 participants responded to and actively engaged in the process of validating their translations and stories. It is believed that this meaningful amount of engagement was positively influenced by my personal relationship with the participants and led to increased validity of the data. Validity implies “correctness or credibility”, but given the relationship between results and reality, no method can ensure “objective truth.” This only supports the importance of the approach of this study; a search for understanding of individual truth.

It has been established in the literature that a challenge associated with using storytelling is a weak ability to generalize (Vink, 2017). However, this will not be relevant here as no assumptions of generalizability will be made. The goal of the study is to give voice to the experience of individuals whom often are not heard by their workplace environment. Despite lack of claim for external generalizability, the presumption is that the stories have **face generalizability**, no obvious reason to believe that the results would not apply more generally (Maxwell, 1996), and as such be valid. While the scope of my respondent pool does limit my generalizability, I am confident that the added authenticity and depth of analysis that I will be able to reach compared to unknown respondents still provide for a valuable theoretical analysis. "Social life is messy, uncertain, and emotional. If our desire to research social life, then we must embrace a research method that, to the best of its/our ability, acknowledges and accommodates mess and chaos, uncertainty and emotion" (Adams, 2015). Alternative interpretations or validity threats which could come to pass in this context could be external factors which influenced how the respondent perceived a given situation. While it may be valid to conclude that the respondent's perception is not-accurate as compared to that of an impartial observer, the core assumption of the study is to take the perspective

of the respondent as reality. Thus, while interesting, this factor is not relevant given the goals of the study.

All respondents were presented with the research questions in a way aimed to minimize normative control or implications of 'good' or 'bad' behavior. However, the presence of myself as a listener and the narrative control resulting from consciously devising any narrative, likely resulted in varying degrees of modified self-presentation. There is no way to eliminate this type of **reactivity**, thus the goal was to minimize it through clear and conscious question formulation. Additional attention was paid to how terminology was used with the participants. While non-digital native is not intended as a discriminatory or offensive distinction, it is understandable that participants could potentially still perceive it as such. Thus, the term NDN was not used in communicating with the participants. The context of my research was simply described as focusing on those who were not raised with technology, and as such had to learn this skill later in life.

While I am confident as to what this methodology can add to the current climate of academic research on this topic, I recognize its weaknesses. Such a subjective approach allows for depth and authenticity of data, however, as stated, it limits the generalizability. The subjectivity stems from the open-ended nature of the interviews themselves, and the extent to which I personally controlled the story building process. Generalizability is limited due to the limited sample size and thus the inability to accurately reflect all variables within the respondent group which have been found by other researchers to affect CSE and the relationship NDNs have with technology. Recommendations for future research would thus include the execution of a replication study, a larger sample size, and/or collaboration between multiple researchers when story building.

Reflexivity

What I have undertaken is unique. In many ways this made it a fun adventure, but it also left me open to risk; influences that I may not always be able to see or fight against. Yet I am confident that this was an important and valuable risk, proven by the end product it allowed me to deliver. In this section I want to be open and honest with you about the context of my data; what it means to me and what I hope it means for you. By being open about my own history and experience I hope to give you clear context as to the lens through which I analyzed the data and my response to hearing the participants' stories. I have chosen to place myself in a central role in this research by interviewing my own family and friends as respondents. I recognize the less traditional nature of this decision, and was hesitant at first thinking the idea to be less "scientific." I quickly reevaluated this untruth as there is precedent for the inclusion of and interviewing of one's own family members (Daly, 1993; Johansen, 2016; Schlucter, 2014). However, I have been critical about the effects of this decision, the benefits, and the consequences.

Reflexivity is a process whereby researchers place themselves and their practice under scrutiny, acknowledging the ethical dilemmas that permeate the research process and impinge on the creation of knowledge (McGraw, Zvonkovic, and Walker, 2000). Reflexivity can be either **epistemological**, relating to the foundations of knowledge, or **personal**, relating personal history and characteristics such as gender, social class, ethnicity, or culture. I explored these consequences throughout this process in the form of journaling. By using self-reflection and writing to explore my own personal experience, I hope to connect the stories I collected to a wider cultural, political, and social understandings (Maréchal, 2010).

My individual identity as a millennial is of relevance here. Labeling myself as a 25-year-old is important because, the technology that I was, and was not, exposed to at a certain age affects my own relationship with technology. The fact that at the age of 6 I was playing Reader Rabbit on a Macintosh computer matters. The fact that I can type blind with ten fingers matters. The fact that I can navigate the Command Prompt window on a computer to troubleshoot problems matters. I didn't realize how much all of these things mattered because I took them for granted. I didn't realize how strong my privilege was until I took the time to listen to those who don't share my experience. In a larger context, it is also relevant that I was raised in Silicon Valley, California in the United States. Silicon Valley is seen by many as the epicenter of technology where the Googles, Facebooks, Apples, Twitters, UBERs, and many more have been born and raised. I grew up thinking that I wasn't "good" with technology because my immediate environment said that "good" meant building your own computer at 14, having your own website coding company at 16, or working at Google right out of college. This is the behavior that was embodied in the world around me. As a result, I underestimated the sizable advantage that I had been given. Additionally, both my parents, and many of the adults in my life, worked with computers and other technology. To me that was "normal" Baby-Boomer generation behavior. This personal history relates to epistemological reflexivity in that it directly influenced the foundation of my knowledge about technology and my expectations around how "most" people use it. When I later moved out of Silicon Valley, these expectations proved to be not generalizable to other communities. This juxtaposition is one of the reasons why I was so struck by the idea of exploring this topic in my research. The benefit of this contrast between myself and the participants is that it allows me to pick up on

those differences. By being able to label something in a story as unfamiliar to me, I can then also simultaneously label it as relevant for analysis.

I recognize that the relationship that I have with the respondents affected the dynamic of the data collection process. For example, displaying socially desirable behavior and/or a modification of their responses as compared to a hypothetical unknown interviewer. While relevant to acknowledge, it is my opinion that such modification is natural and almost necessary to the practice of storytelling. As addressed by Hyvärinen (2008), narratives do more than simply report past experience. They position the speaker within a network of social and cultural expectations. Expectations that can, would, and should exist regardless of the participant's interlocutor. However, I am confident that the benefits of the person relationship which I have with my respondents outweighs the potential cost. I credit the depth of the data I was able to collect to the relaxed and familiar atmosphere during the interviews due to my previous relationship with the respondents. While I recognize that this is not a requirement for the collecting of stories, I experienced it as a considerable asset. Additionally, my prior knowledge of the participants gave me more context within which to analyze and reflect upon the data. Being more familiar with their history, personality, family, speaking style, etc. allowed me to, I believe, more accurately reflect their character in the meta-stories; a process which is by definition already highly subjective. However, as described in the analysis section, additional measures were taken to protect against this, and the participants were involved in multiple steps of the process to provide context and corrections.

I am confident that my personal history and my relationships with the participants have allowed for a deeper and more accurate collection and analysis of the data. More importantly for myself however, is that approaching my research in this way allowed me to tap into my own passion for this subject matter. I experienced this process not as an archaic academic exercise, but an opportunity to explore a topic that was interesting and relevant to my personal and professional future. In these ways I hope that my research can benefit, not suffer, from any potential bias. With this disclaimer I hope that the reader can recognize my bias and navigate the format I have presented to come to their own conclusions.

Stories

As described in the methodology, after the data preparation, the next step in the process was to code and separate story segments by theme. These themes were then grouped around four emotions corresponding to the types of emotions displayed in the workplace as established by Poggi and Germani (2003). The four types and their corresponding archetype used here are:

Attachment Emotions: Proud

Individual Emotions: Apprehensive

Self-Image Emotions: Apathetic

Cognitive Emotions: Prudent

The four meta-stories presented were built almost entirely out of the 16 respondents' own words (see appendix), and built around one of these four emotions. As is the objective with story building, the resulting synthesized story

allows us to make collective sense of individual stories and address varying nuances of a given theme (Wilkins, 2000). Additionally, to share with you as authentically as possible the experience that I had listening to the original stories, the meta-stories will each be presented in one uninterrupted piece of text. The decision to present them in full stems from the aim of this research to facilitate understanding and empathy. By allowing the reader to experience the “telling” of the participants I hope you all will analyze and absorb this data directly. The brief introductory note for each fictional character includes some “background information” as I had when executing the original interviews.

It may be the case that some sentences come across awkward or ungrammatical. This is due to the nature of the speakers themselves, the direct translations, and the limited extent to which the text was edited. The decision to preserve this style was deliberate in an effort to maintain authenticity. It may also seem at times that the transitions between topics are less fluid or that the ordering of topics seems illogical. This is on occasion due to my own statements in the interview which are not represented here, or the result of the participant's own telling. During the interviews I purposely held long silences to allow the participants to choose the next topic themselves. This style from the original transcripts was maintained as much as possible throughout the story building process.

In addition to the structure and guidance that I hope to have provided you through how the stories themselves have been built, you will notice that there are notes with commentary in the left-hand margins. These points relate to the five categories of the theoretical framework within which this work is presented: society, generativity, barriers, emotions, and identity. The commentary provided here will be on an individual story basis. The analysis chapter to follow will elaborate on these points, connect them to one another, and relate the data back to the underlying theory as presented.

How you choose to read these texts is up to you. However, my recommendation is to read the narratives detached from the margin texts as to take the time to absorb them yourself and form your own opinion. Then after refer to the commentary before proceeding to the analysis chapter.

Proud

Attachment emotions have the goal of staying near or far from some person, or of doing something for or against them (Poggi and Germani, 2003). Attachment emotions are thus also intrinsically social emotions, of which pride is one (Lewis, 1995). While also considered a self-image emotion, pride is relevant to attachment here because of the perceived aim of the speaker towards me as the listener; as if the narrator wants to distance himself from “those” baby boomers and prove he wasn’t one of those who “can’t keep up.” He positioned himself as “realistic,” seeing it all as “part of the process” and not complaining when he can’t do something for an hour because the benefits still outweigh the costs. The narrator is a male banker born in 1949 who has been retired for four years.

Societal

Here the narrator gives a clear and progressive description of the technology in his work place which allows us to better understand all of these changes from a first-person perspective. The twice said, “you can’t imagine” referring back to how things used to be indicates an understanding of how drastically our use of technology has developed. Words like “clumsy” and “ridiculous” show that he himself experiences the impact of these changes as well.

With some things I did have some difficulty. Because I started really from nothing with computers. They didn’t even really exist at that time. We had these really really big computers that would take up a whole room. And in the office you didn’t have anything. Then we had lines, data lines, to the different locations and at the end of the line there was a terminal. You had to sign up, in a department of ten or twelve people you had a terminal room and terminals were, you can’t even imagine. They were these massive things. You had to sign up once you think that you are ready to program a certain something then you had to sign up for a specific time slot, and if you were lucky then you were done during that time period and otherwise you had to sign up for another timeslot. So that was a phase that we went through. Just a couple of terminals per department.

Then a couple of years later, maybe just two or three years later, sometimes it is so fluid that you don’t even notice, but slowly but surely it went to one terminal per person, your own terminal. Later on you got this weird little green screen. These tiny little computers. And that was big progress. But you also wanted to have images or visual diagrams of your system. And all of that was so clumsy. With these difficult characters and with a lot of effort eventually you could make a diagonal line or whatever. And then you had to press print and you had to go to the print department where you could pick up your print. Ya, there was a central printer. You can’t even imagine. You had those internal mail systems that would process all of those prints, because you would have a cover letter with the name of the person who printed it and the office where they were sitting. They would sort all of that and bring it to all of the offices. It was really quite ridiculous.

Then the PCs really started. So we are talking about maybe in the early 90s. At first I had no idea what more you could even do with it. I didn’t understand. But there were all off these word processors on it. Word Perfect, maybe you have heard of it? It was one of the forefather of Microsoft Word. And that was such a big deal because then you could write normal texts with it. Because before, even if you just wanted to write a title on your document you needed to use all of these special characters like *[and B for bold and then you had to close it and you didn’t actually see it on your screen as bold. So it was really unclear what it would actually look like. So first you have to make this test print and then you think, “Oh ya, it looks like that.”

Barriers

Societally, these types of "Home Projects" imply the extent to which, even institutionally, it was recognized that individuals experienced barriers in the acquisition of technology.

Society

Internet has fundamentally impacted every aspect of our modern society. It is more than a simple digital development. This candid vignette speaks to its innocuous beginnings. Calling it "ridiculous" or "why don't you just call" just goes to show the extent to which its power and impact was underestimated societally. Or at the very least, misunderstood.

Eventually things started getting faster and faster. It is like people have less patience these days. Definitely seems like something of this time. It used to be the case that when you would turn on your computer that you would go make yourself a nice cup of coffee. And after 10 minutes or so it would finally be ready for you to get started and you didn't think that was weird. But you can't even imagine that anymore. But that is years ago.

If you went home, it was not normal that you had one at home too. They actually had projects, "Home Projects" they called them, to get people using computers at home. The boss would pay for it, or part of it, because the idea was that if you used a computer at home then you would feel more comfortable using it at work too. That was the philosophy. They really needed to get people out of their old way of working, and to a new one. And because not everything is there and possible right away, then people keep holding on to their old ways whether it's paper or land line phones or whatever. At a certain point when you noticed that you could open multiple applications at the same time next to each other. In the beginning it was the case, the first computers you only had one application open. And at a certain point you can open 3 or 5 at the same time. And you could copy/paste pieces of text from one place to another. And that was, that was very easy. I am definitely someone who is very geared towards productivity. And the moment that something can be done easier, count me in. If it doesn't diminish the quality of other things then I am definitely a proponent of using it.

There was a time, 27 years ago max, there was a woman whose husband was a professor and he was offered a guest lecturer position in Boston and she wanted to go with him. She was a researcher, and she said, "I can go because if you all get a subscription to this thing." The university had the same system and it can communicate with each other, and if we all also had the subscription then she could communicate directly with the company while she was gone. And we all thought, "That is ridiculous. Why don't you just call or send a letter or something?" And what was it called? It was called, internet. We all thought it was ridiculous. We have to get this subscription just because she wants to go work from halfway around the world? A year later, we all knew what internet was and how it worked and what it would be able to do. But at the time, she was telling us about it and we had all never even heard of it.

In I think 1986/87, before we all got our own desktop, there was one computer downstairs in the library, in the Information Center, and that one was connected to the internet. And there was this librarian and she said, "Look, you do this and then you can search for something." And we really thought, "How is this possible?!?", but you also had this feeling of, "What will I ever need this for?" because what you had really just looked like an encyclopedia. Ya, how often do you use an encyclopedia at work? Never. So, ya, the first thing that you really saw of the internet is that you could search for things. I still remember that I thought, "What do I do with it? It's fantastic, but what do I do with it?" But that didn't take that long. As more applications became available, and more sources, the more you think, "Oh, I can look for that too." But at the beginning, there really wasn't anything. There were no data files, no address files, all of that wasn't on the computer, it was still on paper. So when I started with the computer, it was actually just a fancy typewriter.

Emotions

Though positive in the reference to “fun”, this emotional reaction to the changes in working style due to digitization are no less relevant than the presupposed negative reactions.

Identity

This poignant example shows that individuals were not only attached to the work they did, but the WAY in which they carried out that work. This colleague identified with her binders depicted in her dedication to lugging them back and forth every day.

Generativity

The narrator is an NDN yet himself also makes explicit references to age and the impact it has had on his coworkers to experience certain changes at particular points in their career. This is an explicit reference to life-course transitions.

Emotions

“Mindset” and “thinking” refer to not only the event which causes the affective emotive response but the cognitive appraisal of the individual in the work they do to process and determine their reaction to a given event.

We originally had offices with our own workstations, but when computers went mobile and wireless we transitioned to flexible workstations. You didn't have your own office anymore, you just had a place to sit and work. Your bookcase and everything needed to go paperless. People used to have two big bookcases full, but now they just had a tiny little thing with a couple shelves, and everything had to fit. That was really a big transition. There were people who didn't sleep because of it. I personally didn't have that much of a problem with it. Actually, after one day I already found it to be more fun than sitting in separate rooms. We used to have closed rooms with hallways and behind every door there were 2 or 3 people at their own desk with a picture of their wife and kids and big bookcases. All of that had to go. That was really a big transition. I remember that people got uneasy and they felt like they couldn't work and they missed the support of the bookcases and the folders and that it all wasn't there anymore. Everything had to go digital. And you have to transition out of the time that everything was on paper. Everything was on paper.

They had support for you. There were people from the information center who would come and look at your bookcase with you. They would say, “All of this can be scanned in and digitized and then all of binder can go.” “The binders can't go!” people would say. But they had to go, or you had to take it all home. But then you couldn't work with it of course. A colleague of mine, she should take two grocery bags full of binders to and from work every day. She kept it up for years because she really felt that she couldn't work without all of those papers and folders and post-it notes. I would ask her sometimes, “And have you opened the bags yet today?” No she hadn't. She didn't actually use it of course, because everything was becoming more and more digitally accessible. If you look back it's pretty funny actually.

There were some people who weren't even 50 yet and they were already exhausted from all of the digital. Which at that time, was basically nothing if you compare it to everything that is happening today. Not everybody approaches it in the same way. Not everybody thinks that it is an interesting challenge. For some of the simpler people that didn't really go to university, it might really just be too much for them. I am personally of the impression that everything that you can digitize, that you should digitize. You shouldn't not digitize something and leave that behind. I am completely convinced. Some people refuse to participate in the system because they find their own work to be more important. They tell the board that they are going to do it, but then they just don't. And they can keep that up for quite a long time. That is really something that has been an issue the last 5 or 6 years. That the system is built in such a way that everyone has to participate but not everyone does. But you know, I have always found it fun. I never really felt any resistance toward automatization.

I feel like the differences just have a lot to do with who you are and how you think. I do notice that the older employees sometimes just dig their heels in and they don't always believe in all of those newfangled things. Before it was just fine. So they are not open to it. They really have that closed mindset. So that does definitely have to do with personality. I feel like they suffer because of it. The first reaction is always, “But it works just fine the way we are doing it.” And you have people who keep this up for a very long time, years. They turn the computer on because it looks good, but they didn't actually do anything with it. Those people really have to be helped out of their old ways. And the new has to prove it's

worth. And that will happen just fine as long as you dare to leave the old behind. The bookcases, and the folders, and the paper, and the land lines. People really had to be helped to leave all of that behind. And it only really works if a bunch of people around you are doing it too, and then you really start to see the benefits.

I wasn't a front runner. But I was one of the first who wanted a mobile phone. And they thought it was really obnoxious. They thought that it was really weird. And then I said, "but I am not reachable enough for my clients." Because they would call my secretary, and then my secretary could only call me at home. So if I was out of the house or on the road I wasn't reachable. You probably can't even imagine what that was like; not being reachable. So then it can take three days before I am back in the office and find a handwritten note in my inbox that says, "this and this person called and if you can call them back immediately." Immediately in those days was with a grain of salt because it didn't exist as it does today. But ya, no one used such a thing in those days so it was just the two of us in the whole company that used mobile phones. No one else used them. Otherwise you could only call someone at work or at home. You would call the office and then the receptionist would have to connect you through and it was so silly. There were 200 people in the office and all she had to do all day was answer the phones for those people and connect them through. It lasted a really long time actually that she kept doing that. If the client called she would just say, "He hasn't been in." And those were very normal reasons. People didn't think that was weird. I'm sure you can't even imagine. But the entire world, and your work was just organized in this way. But to let that go, it was a huge thing of course.

I can't type well, I had never gotten my diploma for typing. I only started typing in my last job 13 years ago. When I started there I thought, "it is useful." So I followed a typing course via the computer. No one told me that I needed to get my typing diploma, but I noticed myself that it took me a long time. If you learned to type without looking then you notice that it goes a lot faster. So I took this course via the computer and spent 30 to 45 minutes every night practicing and eventually you got better. During the formal computer courses you learn the buttons and where to look and the different systems, but really it's just the same thing every time as the computers develop. But in those first years, if you needed something typed then it would go to the secretaries. And eventually there was only one secretary left who supported the director. Actually now, I do a lot of the things that my secretary used to do. I do it myself now, and I still have more time left over. Kids these days probably won't even have to learn how to type I guess. Definitely it is very useful. If you learn it then you can profit from it for the rest of your life.

Sometimes you have colleagues that come to you and say this or that would be useful for you to use. I personally don't have understanding of all of the deeper technologies, but that is not necessary because I am more on the surface user interface side of the development process. Business and IT. Translating what the business wants to what the actual solutions are. All of the new modern programming languages and all of that stuff. I know that it is there but I am not going to bother to really make it my own. It wouldn't work anyway. I wouldn't be able to anyway. I'll do so much, but at some point it becomes someone else's specialty. I rely on the system to work for me rather than going in and making the system my own. I can do various things. The basics. Which is fine, because there are other people for whom that is their primary

Generativity

The generativity and workplace culture referred to here is not for the narrator explicitly but for the receptionist. Her work is referred to as "silly" and in modern offices is completely obsolete. Though not the subject of this narrative, it is relevant to note that feelings of usefulness for this receptionist have likely also dramatically shifted due to digitization.

Barriers

Though the narrator describes it as a conscious decision, Attribution Theory sees this line of justifications as a coping mechanism for bypassing the barriers to technology. His learned helplessness is manifested in his explanatory style.

Identity

It is with this section that you can most clearly see the narrator's pride. He is proud of his own technical skill and understanding and actively engages in identity work to show me that he distances himself from others who do complain or are not as realistic as he is.

job responsibility. I don't feel like I need to know everything any particular device or software. I use it very specifically for certain goals. I am not really interested to actually dive into how that all works so for those types of things, and then I do easily go to the younger generation and ask them, "what do I do?" So it is not really my hobby that I think, "oh it is fun!" I am not the type to be the first to pick something up. I let other people do it first. I let other people really get into the details. I just thought, it needs to work, and it need to be able to do this. That is what the experts were for. But you have to remember that for a long time at the beginning, the technology was so complicated and so user unfriendly, that it was really only the domain of the experts. They knew how it worked and they would explain it to us.

Ya, in our organization a lot of things break. A lot of things break. It is not super frustrating. It's kind of part of the process. As an organization we are kind of a front runner in the whole digitization process so if we are going to use a new service then you know ahead of time that a lot of things are going to go wrong. So it is all part of the process. And you know, I am realistic enough to realize that the IT gives me a lot and that everyone once in a while you are going to have a time that you have a problem or that you can't work. Ya, that is all part of the process. And you can say, oh shit, I can't do this for an hour, and then you go do something else. Ya, it gives you a lot of new functionality. New options. And that gives a lot of efficiency advantages. And the fact that every once in a while that it breaks, that takes time, and that lessens the efficiency advantages. But that is unavoidable. You can't expect that every time it is going to work. That is not going to happen. At a certain point you have already seen so many of these cycles of changes and new things that you start to look at it relatively.

Apprehensive

Individual emotions include primary emotions such as anger, disgust, fear, happiness, sadness, and surprise (Ekman, 1992). Each of these emotions has a “family” of corresponding emotions. Apprehension falls within the family of fear emotions (Ekman, 1991). The interview moments which led to the building of this narrative were very emotionally charged. Words like anxiety, fear, and feeling stupid were used over 20 times in the original transcripts. I felt most passionate about portraying this narrative for I feel like it is the one society is most inclined to brush off, the stereotypical “just doesn’t try hard enough” employee. The narrator is a female nurse born in 1954 who plans to retire in one year.

In healthcare specifically I often find that digitization is at the cost of personal attention, and that definitely shouldn’t happen. We were for example, at a certain moment, so busy with the fact that all of the medications outside of a particular roster, that we had to take pictures of it. And it made me feel really uncomfortable. You had to frame it in a certain way so that it was easy to read, and with the pen next to it and all of these things. And then it went somewhere and then I got an appraisal. Orange was that it was still pending. Green was approved. And then I could actually give the medication. Sometimes it made me feel like I was stupid because before this I had always just done it. You look carefully at what you need to give, and you sign the paperwork. But the fact that you are sitting there looking at your phone instead of looking someone in the eye. I think that is really a loss. And sometimes I find that it really does go too far. Because things are digital and then you have to do these things here and there and there and it feels so bureaucratic.

I really notice that in the last years I think 10 of my colleagues have left because of digitization in healthcare. People of my age that are really opposed to it, that they don’t feel like it, or that don’t feel like they can get a handle on it. They get pushed out of the company because management is implementing this change and that has to do with politics and health insurance that keeps getting more power and makes more requirements but that didn’t used to be the case. It is not always convenient or easy. You don’t have a lot of time for it. Normally you just give the medications. You control the information, you look carefully, you sign the paperwork and then you give it to the woman with a glass of water or something else and then you are done. You can’t really expect me to sit here waiting to get approval to give a pill. I think it’s a weird system. I can really judge that for myself. They see it as an extra control mechanism. And there are certain medications that you need a double control mechanism for that are really high risk. But we had other solutions for that in the past as well. That one person would prep it in the morning and that then a second person would give it. Then you already have a double control. You can search for other solutions. But this I just find so exaggerated. Some people feel time pressure and then they get nervous. I would even dare to say that because of that there have been more mistakes made.

You have a group of people that is really afraid to use the computer, of my colleagues. People who are my age that weren’t raised with a computer and they never learned. So you have to learn it all yourself and there was so much fear of computers in my department when we needed to start using the computers for example with the electronic patient files.

Identity

The narrator explicitly mentions stakeholders like management and insurance agencies. This can be seen as relating to Mill’s sociological imagination in how it helps us set processes of individual identity work within a structural or sociological context.

Emotions

The narrator explicitly mentions, multiple times, experiencing the primary emotion, fear, which apprehension is in the family of.

Emotions

She talks about explicitly registering her emotional response to the situation and then consciously deciding how to respond by not participating. This relates to how employees manage their emotions at work, among others, through cognitive appraisal.

Identity

Digitization is expressed not only as a change in tooling, but a change in the fundamental nature of the work which negatively impacts the ability of healthcare workers to identify with their field and responsibilities.

Society

Explicit reference to the measurable effects of digitization and the way work is done by who.

When that got implemented it was not just something simple. And then people asking, “how do I do this?” Or, “I don’t dare to do that.” Or they would just not report because of it. And there really is a lot of anxiety. I feel like that is really underestimated. For the elderly, and in their community, there were computer lessons, but for the group of people that was 45 to 55 there was nothing for them. They just from one moment to the next had to use it on the work floor. If you don’t get it then you feel like you have been dropped in the middle of Tokyo. And that really causes panic and stress. All of those alerts and messages when things go wrong definitely do create this anxiety culture.

When things cost you more time and you don’t see the point, I think that is a lot of wasted time and effort. It just gets pushed through, but nobody asks us if it actually works. And in that way sometimes I can be a little bit stubborn, I just boycott it. I am not crazy, I just stopped doing it. And then sometimes you get an email from management saying, “We notice that not everybody is blah blah blah.” Ya, whatever. They force you to use these types of things, and then you lose colleagues. It just doesn’t work. It is so irritating. To me that is not progress. It just needs to work. You need to be able to see the advantages of it right away.

I think, because these days there is so much that gets automatized, which also has positive things, like that information is more transferable, but in my time when the automatization started I saw a lot of people had a lot of trouble to be able to submit their reports via the computer because they already had less skills with written expression and that is also not why they choose that type of work. And then I think, there is so much money in these systems and I don’t want to say that it shouldn’t happen, but people who choose to work in healthcare, they are so exhausted from all of their reports to actually be able to do their work. But I don’t want to give you the impression that I want to ban the computer or something. There is just so much that gets lots in that step to digitization. I have met so many people who lost the joy in their work because of it.

But here in the organization we do have systems that have had a really big impact. If I think back, up until 6 years ago, there were 60 employees walking around the halls every day looking for and delivering client files. That is 60 people who earn 30,000 euros per year, and half the time they were just looking for things that were half lost or laying on someone’s desk. Then we transitioned to the electronic patient file system and that was an enormous transition for people. From that moment on, every treatment given to the patients needed to be signed off on by a doctor in the system. Before you would just do what you knew to be best because the doctor would think that it was fine if you thought it was necessary. But that was a really big transition.

When I think back, if you had to write something you would sit down in front of a typewriter and then there used to be carbon paper behind it, and for us of course that is very logical but for people who are younger they might think, “What is that?” So that is one of the things that I was thinking about where you just almost can’t imagine how that used to go. You really just had to write it all down by hand and then someone from the administration would type it out. In those days it was the secretaries that did all of the computer work for us. They were already the typists, so the computers actually

went to them first before they came to us. I think it was in 1985, that was when you first saw computers being used by the secretaries. But I remember when I was at the university there were some hallways with specific rooms and they had computers. It was very special. They were these really big computers and we were one of the first departments where they got implemented with zeros and ones and ones and zeros and ones. You know? I remember that. Those were practically monsters. There was this whole room full with all of these devices. Some people thought that it was a challenge to engage with those monsters, but I didn't. The first computer was of course a much bigger transition than all of the fine tuning since then. In the beginning you thought, "That will never be for everyday people. That will just be for the business world." You thought you would never have to deal with it. That is how that goes. But you really can't compare that to today anymore.

Barriers

The narrator acknowledges the barriers that she faces when following a training or trying to learn a new technology. Her Learned Helplessness is exhibited in the alienation and anxiety which she expresses. The important realization is that these types of NDNs are often the ones who get labeled as simply not trying hard enough. However, it is clear from the narrator's account that this is not how she experiences it.

Now we kept getting all of these trainings for computer skills and somehow, I followed all of these different trainings and I just couldn't really make it my own. I didn't see the accessibility and the options. And maybe for you all that is very normal, but you just don't dare to press on all of these different buttons because then you are afraid that everything is going to be gone and it really stresses you out. I am just not really fast with it, I just forget everything. So every time that I have to think of it again, and I don't always write it down, or if I do write it down then I lose it. I have a vague memory of this or that. But, I just think, how did this work again? And then it is just my own stupid fault. Now I am often afraid that if I try something that I am just going to break it or that it is going to get stuck or that I won't know anything anymore of what I am doing or that I will have lost information. So that holds me back. But when I see the kids they just do whatever and it always works. So ya, I find it really quite scary. I really don't understand any of it. I really don't like it. Sometimes when I try things out I'll eventually find it and go, "Oh I got it!" But then I think, "How did I get here?" I don't know. Sometimes it really makes me unhappy, or angry. I don't always find it to be a step forward. I notice it myself, that I really had an aversion to all of the things that they started to want to do digitally. It's not my way of working. And it just doesn't resonate with me. It was like it just didn't stay in my brain. Things that I don't know and that I don't use, then I just get stuck and I get stressed and I think, "go away. Forget about it." I don't dare to just try something because then what do you do? I am not comfortable with it. Sometimes it is not a question of whether or not you do or don't want something, if you just can't. If it is not possible for you. If the steps, and the changes, are too big and too far away from what you are used to. It has nothing to do with putting your head in the sand. You literally just don't understand it. I really think it is underestimated. But it is always going to stay problematic. You are always going to have a group of people who fall behind or just give up.

So I think that the first important thing is not too much at the same time. And if you do make changes, really guide people. I would rather have a person that sits next to me and explains it to me, and ideally then another three times. Because otherwise it doesn't stick. That way you won't end up with people saying, "I can't do this," or "that doesn't work," or "how was I supposed to do that again?" But those reasons, that make me just think, "I'll do it my own way." I am more a paper person. That is what fits me best. I guess in that sense I am a bit inclined to take the easy way out. Sometimes I can really be jealous of the younger generation that so easily can just get to where they need to be in a device.

Identity

The narrator's relationship with printed vs digital text is a prime example of the manifestation of her invisible stigmatized social identity.

Generativity

The feelings of usefulness assuaged by the ability to share one's knowledge with the younger generations is blocked in these types of workplace cultures where the type of knowledge valued has fundamentally shifted.

I still can't type without looking at my fingers. I wasn't raised with that. And I have tried to follow those courses, and I did it for two evenings and I thought it was so ridiculous. I thought it was such a waste of time. To really spend a whole evening forcing yourself to do that. And then you really notice that you are not super young anymore. When you are younger you are much more flexible of course. I just don't have the time or the interest or the motivation to invest in it. I do find it really stupid of myself that I didn't invest that time and attention years ago.

What I do recognize is that when we have meeting for example, and I do it myself too, though I don't do it very often, but certain pieces that I find are really important I will still print them out first. And I see that happening a lot. If I printed it out I have the idea that I read it better, that I understand it better than if I am just looking at a screen. In the past everything was printed, and that is becoming less of course. But I am so used to it that I would really rather have printed paper in my hand than looking up at a screen. In print it feels closer to me, or I don't know what it is. I read it much more consciously that way. If it's digital I am more inclined to just scan and think, "I get the idea." But if I print it out then I really get the feeling that I need to read something. So if you have an important meeting, then you really want to be so well prepared that somehow you still just want to have it physical in your hand. Paper has a smell and you can feel it in your hands. You can turn a page. And I can imagine that you have that association much less than we do.

It is about information accessibility. The downside is that there is such an overflow of information that it makes it hard to find things back. All of the information sinks into a pit and you never get it back out. I still really like hand written to do lists. The more traditional lists and check lists. I need to see it. If it is all in folders in my PC, no matter how well organized I am. It feels gone. I really need folders. Plastic folders. And every morning I can look at it and think, what do I really need to do today? What do I need to remember? Ok, everything is in the computer, but in that way you miss a lot of real knowledge. You notice those types of things when working with younger generations. They say, "we'll look it up." And I feel like, but if you are sitting in a meeting and a question is asked of you, you can't really say, I'm gonna look it up. Then the expectation is still that you have that information top of mind.

Apathetic

Self-Image emotions regulate goals of image which are traditionally emotions such as embarrassment or satisfaction. Apathy, “lack of interest or concern” (Dictionary, 2002), is relevant here as the portrayal of apathy is used by the narrator to regulate his image; the image of acceptance of his technologically aloof identity. This narrative was built around texts which portray acknowledgment of the advances of technology, utilization of those advances, but a lack of enthusiasm or curiosity. He feels like what he has is “enough” and chooses to just leave the rest by the wayside. The narrator is a male consultant born in 1957 who plans to retire in five years.

I have never used a computer for preparing my projects, and I could have in the later part of my career, but there is something else, I like to prepare by hand. I would rather do that than access a computer. I chose not to make that transition because I was able to. They could have, if I had been younger, if I had been twenty years younger I would have had to embrace that technology. No doubt about it. And I would have. If that is the way you have to do it. But probably within 5 minutes somebody would have already lost me. They just assume that I know what all of this is. So I think, it’s fine. I tried. I never really have the feeling like I am missing anything. If you work at home or you are an independent contractor then there is nobody that really pushes you or informs you. I don’t access it because I can’t be bothered. With internet I used to think, why is it even necessary? You can send what you need through the post, and then you get everything you need to do. You send a letter and it arrives. Now your email inbox just keeps filling up. Ya, you didn’t used to have that.

Before you were only actually doing you work, but now it feels like you spend half the day just getting through all of your emails. And that is something that you have to learn. And change your behavior and way of working to address that. Because if you don’t do that then you are just running around like a chicken with its head cut off because all of the time slips past you. So you learn to deal with it. But it is a big part of your work. You get all of these emails in, and you do want to keep your inbox empty. A lot of questions come in that way. I feel like, how do you get to your real work?

But I am also not on Facebook, not on LinkedIn, none of that. I find it is less important. Even though sometimes for work it actually would be practical. I can look up information about my clients. But, then I find the disadvantages greater than the advantages. However, I have had a website for a long time. And last year, a year ago, my new website went live. The son of my neighbor helped me with that, but that took quite a while. My old website didn’t work anymore. It was made on a system that was never really search engine optimized. But I didn’t know how to do that, I didn’t know anything about that, and if I had to start from scratch then it would have cost me a lot of money so I just left it. So I was never really searchable online. But I hear from a lot of people that actually you should tweet and you have to put all these things on Facebook; make a Facebook page specifically for the company and that you have to make sure that people like it. And I thought, I can share a bunch of messages like what other people do about how this is interesting and that is interesting. And I do that sometimes if I find it really important. But most of the time, I just leave it. And that does have the consequence that I am not very findable. We have had seminars from the professional organization where they talk about

Barriers

The narrator’s low sense of computer self-efficacy led to avoidance of a problem he knew to exist.

Generativity

Engaging with new internet technology, even only on the narrator's limited terms, allows him to stay current with information in his field and thus increases his feelings of productivity and allows him to avoid stagnation.

Society

This seemingly benign example of the transformation of telephonic communication speaks volumes about the changes it has instigated in our society. The ability for colleagues to phone one another from anywhere anytime created the context in which reachability and the nature of work shifted dramatically.

how your target audience is online so you need to be online as well. Otherwise you are going to miss the boat. So ya, that is a very important medium. I do realize that. But with the tweeting and everything I just find it so annoying. I don't even read it myself. All of that complaining.

What I do do is Google things all the time. Internet made my work a lot easier. I experienced the beginning of search engines, and now you just go Google something and it is very normal. The advance in the last ten years is superb. In the beginning it was a bit clunky, but it is more dependable now as long as you know what to search for. For me that is really the source of all of my information. I search for things a lot on the internet for things that are related to my field. Everything that I want to know about client's businesses, different careers, laws, all of that information. I Google like crazy. There is not a single day that I haven't Googled at least a couple of times. So that I really do do a lot. That I do find really convenient. That I can really easily search for things. So when I have the extra background information, and some things change very quickly as well, just recently a lot of things that didn't used to be possible are possible now and the other way around. So I do find it really fun to know all of that information and to use the internet. The more I know, the more I can help people. In the beginning I didn't have internet as that source of information so everything was much more difficult. You really had to look up everything in books and in the library. That is where this whole bookcase full of books came from. You really had to get it all out of these information books. I barely look up anything in real books anymore. Now I think, ya. It is really easy to just do things via internet. So I guess I do. And you see your kids doing it and then you think, "Ya, I can do that too."

I can remember, we always had a phone at home. The first phone we had, it was a dial, and you first had to press a button to make sure the other party was not on the line because there weren't enough lines and you had to share a line. They called it a party line, it was common everywhere. You couldn't dial, you had to go to the operator to dial outside your district. Seeing these transitions to direct dialing, and then the world. It was amazing. It's all telephony, not just mobiles. So mobiles are a wonderful extension of that. But it is a longer progression. I mean our first phone didn't even have a bell in it, the bell was separate and wired somewhere in the hall.

But I do remember, when the mobile phones first came, I remember saying, "I don't need a mobile phone." On the one hand I think that it is useful. But I also think that there is a downside. Then people are always on their phone. I think that is really irritating. It's just kind of a pity. You used to really talk to people. Sometimes you have two people sitting next to each other and they are both staring at their phone. If I were to go out to dinner with someone I would never look at my phone. I leave it turned on in case something happens so that I am reachable but I would never look at my phone. It's just not very social and it's not necessary. I think it was also just kind of my aversion to the phone in general, being reachable. So I wanted to keep it away from me.

Most of the same time I don't find it inconvenient not having my phone on me. In the weekends my phone is laying on my desk. So I normally don't have it with me. And I can definitely forget it sometimes when I leave the house in the morning.

Emotions

The way in which the narrator explains away his disinterest in technology can be related to the externality explanatory style. He is attributing his emotions to factors outside of himself as an embodiment of his learned helplessness, specifically identity by stating that working with people is more important to his work than working with technology. However, it is not to be discounted that this is his true and authentic perception of his circumstances. While outsiders may be inclined to label his as an NDN with insufficient technical skill, his experience is one of contentment and apathy.

No. If I were to get called right now, I would definitely find that a disturbance. People just expect an immediate answer. But I don't really like calling in general. Yes, I have a mobile phone and I can email people, but for me the true essence of the work is in the face-to-face contact. I get so much more information when I am sitting across from someone than if I do it over the phone. If there is a conflict then I need to know what is actually happening. You can say over the phone, "It's fine," but if you are sitting here with me then I get a lot more information both verbally and non-verbally than what you get over the phone or via the computer. I find it to be great support system, but not a tool through which my work actually gets better. But it does get easier. And that is also the nature of my type of work of course. If you ask me, "What do you do every day?" For me good conversation is really more important than sitting behind a computer.

I see the advantages of the new technological possibilities. Like how it is much easier to share things with each other. If someone is sitting in a different location you share your screen, audio, you talk to each other, you show each other things. That didn't used to be possible. So those are huge advantages. But still I find, face-to-face together in a room with somebody with a whiteboard the best way of working. You see the way that someone reacts and together you can develop something. And I just think that that is really powerful. That is powerful. Absolutely. Now there are just more options. So not only that all of these things come at you where you think, "oh can I handle this?" But also new opportunities. I see that side as well. I often have to consciously tell myself, "just try it, see what happens, be flexible." But sometimes it does get pretty tiring. And it is difficult. It takes a lot of effort.

I am not afraid of technology. I do have problems with things sometimes. But Outlook and that kind of stuff, I have never found that to be a problem. It was only super useful. You can easily look in someone else's agenda. It is very easy to just pick a time, invite people. All that kind of stuff. I can never remember finding that annoying. I always thought that it was quite fun. And those changes I have always appreciated it when new things came. The essence of my work has not changed by way of the technology. A bunch of floppy disks is the same as a database. I have always just experiences them as different support systems. One might be faster or easier to access or creates prettier outputs. But the essence really hasn't changed. I really don't like administrative processes, so it was the work that I didn't like that got taken away. Before it would be like watching paint dry. You would sit back and think, it'll be there in a minute. But now you expect it to be instantaneous. Rather than it just being a wonder and a miracle, we are becoming increasingly discerning to think, "it shouldn't do that." We are used to thinking that it should be immediate. It's expected. It's outstanding how good it can be and therefore an, irrational, annoyance when it doesn't perform as you know it can.

Prudent

Cognitive emotions relate to feelings about emotion; responses to the outcomes that have been generated under the direction of reasoned principle (Yob, 1997). This narrator is smart, cautious, realistic, and balanced in seeing the pro's and con's of a digitizing workplace. The emotion prudence is thus applicable here as it refers to "wisdom or judiciousness" and being "shrewd in the management of practical affairs" (Dictionary, 2002). This type of NDN can be precarious as their struggles may not be immediately visible for they appear to engage effectively with technology. The cognitive effort of the narrator can be seen in the comparisons between "old" and "new." The narrator is a female secretary born in 1956 who has been retired for two years.

I experienced the entire digitization. And the beginning from the perspective of a support staff function. For a long time I was a traditional secretary that learned to type completely manually with ten fingers on a typewriter. And then later with an electronic typewriter. And much later the computer came. At the beginning of my function, and that was the really big change, you worked as a secretary one-on-one or for a group of people. And you did everything for them. Because at that time those employees did not do anything digitally. Every letter was typed with carbon paper behind it and every appointment was made by the secretaries. You would sit next to your boss's desk and go through the mail with them. That is the perspective that you are coming from. With bosses that are completely not digital because they were not the ones who would be sitting behind the typewriter.

Must have been 1984 when we got a fax machine and that was so miraculous. From one side of the world to the other, in a moment you can signal it or something, so it was also in the computer room and that was very secret and people talked about how soon it would be in every office. And everyone was like, "Wow, that can't be possible." The fax machine was a huge improvement for my work. Faxing was much better than waiting for two weeks for things that would never arrive or couriers who would have to hand deliver things. The fax did really improve things. And I thought it was fun, how fast everything went. I had a computer myself at one point, one of those IBM computers, it actually wasn't even really a computer, more just a typewriter with memory. So I could type a letter and then it would be printed out all at once. I don't know if you are familiar with these kinds of things? But it would type out the letter. So I guess to some extent that was already the first small computer.

We are of the generation when everything started to digitize and I experienced it very much myself, with all of the new systems. Look at our CRM system for example, all of a sudden the information from 12,000 different Excel files and Word Perfect back then as well still. All of it needed to get put into a CRM system. Where? Nobody knew. What? Who? No idea. So there is a set of super programmers sitting across the table from you that knows all of that. That then later says, "but you didn't ask this or that." Ya, but if I don't know how it works then I don't know what to ask. You literally are speaking a different language with the feeling like you never actually got an answer to your questions. And then that anxiety, the

Society

The narrator gives a clear and detailed description of how her role has developed over the course of her career. This indicates both elements of digitization and life-course transitions given the impact of at what point certain changes took place.

Emotions

Anxiety and irritation are the key emotions expressed in this section. The narrator is brought to experience these emotions at work and Affective Events Theory links them in her mind to the experience of having to, for example, facilitate the implementation of the new CRM system. She expresses managing these emotions by, on occasion, refusing to participate in the new system.

anxiety of, I don't understand you and you don't understand me. The irritation between people, that then don't understand each other. The one person says, "but it is obvious isn't it?" How many times I haven't yelled, "Ya, but I can't ask questions if I don't know that that should be a question." That is definitely the anxiety to really give yourself over to the new system. So I think, what I have, maybe it is not the most efficient but it works. I think it is fine to participate in the new system, and to invest in something new, but maybe I did stay stuck in the older systems for a while.

We started sending emails instead of paper notes to each other for example. But that was also the time that people started sending a bunch of nonsense to each other through email. If you would send letters, you would really think about it. What do I need to write? When you sent physical letters you had to wait up to four days for a response. I sent it, if I'm lucky you get it the next day, but who knows if the person can read it right away, and then they have to send it back, and in the beginning it really took a couple days. So just a silly note or a message you didn't do that by letter. You would maybe call someone or ask them during lunch about this or that. But these days people email about every stupid little thing. It drives you crazy. You get thousands of emails a day in a company and it makes no sense. You did notice pretty quick there was quite an over kill, people would think, "I'll just send this information to 20 people and then everyone knows it." What they now often call communication is informing someone via email. That is not communication. That is just one sided telling people things.

I do check before I go to bed and stuff like that, but I am not someone who is always checking. I just check when it works for me. But there definitely are moments when you get an annoying email, when things go wrong, and then at 11, 11:30 you go check your email and then you can't really sleep well. That is annoying. I almost can't imagine anymore what it was like to really wait for the mail. Ya, and there is a whole generation that doesn't know any better. They don't know any better than always being reachable. The more you make things easier, then the more people start to use it. Sometimes over use it. And I definitely had that with email. That there were just too many emails. Before you didn't get interrupted as often. Before, I would get the mail every morning, and sometimes again in the afternoon and you got an envelope with all of the things for you, and you could decide for yourself when you were going to open the envelope and look at it. So you could just keep working. If you were busy then you just keep working. But these days people get disturbed all the time through a phone call or email and then the other person expects that you respond right away to sometimes the stupidest questions. And I think that it costs us a lot of time. But what is available gets used.

Internet professionally meant the beginning of working from home. That is convenient on occasion, but I find working from home to be an awful form of cutbacks. It's bad for the work dynamic and for team cohesion. Bad for company pride. I did it myself a couple years, and what you then really start to miss is the energy. You miss being able to tap into things that are happening and what you hear when you are standing next to the coffee machine. All of that has disappeared. Learning from each other, hearing things, asking someone if they can you quickly check this letter for me. You don't do that through email because then all of a sudden it is very official. That is really a loss.

Identity

In this section we see the identity work which the narrator engages in to correlate their social-identities with their self-identities in a changing work environment. The decision of when to check and not check her email is a decision that she was not faced with prior to digitization and the internet.

Society

The narrator expresses how changes in societal trends directly impact her experience as an employee. This is epitomized in the comparison drawn between generations to show change over time.

Generativity

“Have I worked all these years for nothing” is an explicit reference to the core tenants of generativity and wanting to pass along a life-legacy. The narrator implies that due to digitization these retired or laid-off workers feel that they can’t do so.

Barriers

The manner in which the narrator speaks about her skill with Excel is an example of computer self-efficacy. Her judgement of her own ability acts as a barrier.

But the biggest problem is the reachability. The idea, the feeling that you have to be reachable. And it also, the other way around, allows you to feel irritated if people don’t respond to you immediately. So it is very double. Earlier a letter had to be typed and approved and then signed, and it took 4 to 5 days before it was on somebody else’s desk. And everything that you did, you kept that in consideration. Now emails, 5 minutes before end of the day emails still get sent out. So it always feels very urgent and forced. That I find really a big problem.

I think that remote working will dissipate in time. I think that it is just a wave. You see it that bosses no longer expect that you are working 24 hours a day and that you are allowed to turn off your phone. Work/life balance was quite out of balance in the beginning. Because it was very chic and a status symbol to be able to be reachable and to be able to work and the bosses stimulated that, that you were always reachable. And when the laptops first came, it also became more normal that outside of work hours you would finish your tasks. And in the beginning that was fun, but eventually it became annoying because it became too much. I feel like my generation was in a hose and that the next generation will have found more balance between life and personal.

I ask myself if it is really all worth it. When you talk about themes like burnout. It used to be the case that people were stressed and over worked, but the term burn out you didn’t have. And of course I am also of the generation that you have seen people really get pushed out. I’m also a little bit sad about all of the things that you lose along the way. All of the jobs that get lost. And for those people we no longer get a replacement. So they are sitting there unemployed and then you think, “have I worked all these years for nothing?” We assume that those older people just understand everything when really they are much more careful. When I see how my grandson for example, he is two and with his fingers he uses the iPad. We still don’t have that. We are still scared that we are going to throw something away or do something that can’t be undone. And your generation doesn’t have that. You try things and you think, we will see. But if that anxiety is there then it is really difficult work. For me for example, with Excel, I used to have to calculate certain things and now you just put it in excel and know that it will be correct. You can calculate much more. So that of course has lots of advantages. I can use it, but I can’t actually make them and I have very consciously decided not to bother learning. I am not really a numbers person to start with. I can read it, so I can understand the balance and I can do the rest. And that, I am not going to learn anymore, and I’m not bothering anyone. Sometimes maybe it is inconvenient for myself, but then I find a different document and enter the numbers into the old spaces and you get very creative in your problem solving in that way.

I have not delved any deeper into Excel than to know that there are different sheets and that I can use the sum formula. That is what I use it for mostly. But our finance guy for example is very precise in his monitoring systems, and he has a very specifically formatted need for information. But there is no room for people who don’t fit into his system. So what he requires from me is that I conform to his system. What happens is that I get pushed into his system of expectations. What happens is that I run into my limitation when it comes to Excel, but also discover through that that I need to fit into his system. That I need to be compatible to him and not the other way around. And I find that really aggravating. I really get this idea like, “Um, who am I in this situation?” You would think that he too is working for the greater good of the

Barriers

The narrator connects the barriers her generation faces with lifelong learning to the culture of the education that they received. This expression of Attribution Theory explains her mindset and the consequences thereof.

Generativity

"If you are getting older and the number of changes is increasing" is a direct reference to the concept of life-course transitions. The narrator is not simply referencing these two variables, she is placing them in chronological relation to one another by reference their concurrence.

organization, so when I ask he seems willing to help, but to do it in his way. When I come to him with a question or ask for help he says, "I'll do that for you real quick." Because he can do that "real quick." You can imagine. But ya, I don't do that real quick. For me that is a whole learning process. Ya, that is really annoying. And these are symptoms of something deeper in the communication. That you aren't seen as an equal.

And we are from the time that after we finished our formal education it was really normal to think, "Now you know everything and you don't have to go to school anymore." Lifelong learning wasn't really a thing. Ya, you learned things in practice, but not that you went back to follow a training to learn something new. People didn't do that. In my experience, we didn't need to do that anymore. It did change over time, and it's fine of course. But that did lead to the idea that you are more resistant to all the extra things that you have to learn. And if you are already under a lot of pressure at work, then you are just not waiting for that extra thing to be dropped on your plate. I really just thought, "Again, we have to learn something new. I just can't right now." Ya, in that kind of period. I just felt like, leave it be. And if you don't feel comfortable with something then you don't see the advantages of it. That I would have to enter the same numbers in a different way in a new program. I didn't even understand what I was trying to understand. I felt like, I know what I need and I'll leave the rest. Eventually I did have to do it though. But at the beginning there are a lot of hurdles. So if you are getting older and the number of changes is increasing, because it really is happening faster than before, then it just hits you twice as hard. More changes in more different ways and you are getting older so that combination, it just, it is a lot. And sometimes I just think "phew". I am happy once the week is past. The question is how long can you keep up and go with the system? Sometimes I think, "can I really still keep up with this?" So it is important to keep that balance. In the search to really get comfortable in all of those new technologies and tools, the new way of working. I knew that technology was going to change the work, but not immediately that it was going to improve things. It takes a while before you really see the advantages.

You currently have the generation that did experience the way it used to be, that saw the advantages but also disadvantages, and now participates in these new changes. And that is what I mean when I say we used to know a different way. And I don't mean to imply that everything was better because we had to do all kinds of unnecessary work and lists and things. Of course I agree with that. Of course there are also advantages. But there are also disadvantages of all of the changes that there are now. I hear it from lots of other people in my generation when we are talking about it. So not everything is good. It has given us more freedom, but for my job you also have to look more at the human side than only the really practical side. I think that it also has to do with the fact that if you all are only focused on the computer then it is only digital. It doesn't really have a face. I think that once you lose that, our generation, then it definitely will become a totally different story. Then new is just new. But in our generation it also has to do with respect for people.

Analysis

The following analysis aims to guide through the storied data as presented on the basis of quasi-statistics, themes within the theory, and narrative analysis. While the stories in their full text were intended to provide the reader with the *experience* of hearing such a narrative event from a fictitious speaker, this chapter hopes to clarify that content while also providing a more intricate analysis as to the impact of what was presented.

Complexity

It would be naïve to go into any research topic expecting to find a simple solution. However, the complexity of the data that I was confronted with truly surprised me. While I cherished the moments when participants referenced similar material, as it felt like a validation of “being on to something,” no two stories were alike.

As this is a qualitative study, it would be misguided to take the following numbers as statistically decisive. However, it would also be misguided to neglect the insights which they do hold. Quasi-statistics, simple numerical results which can be easily derived from data, are recognized within qualitative research as a useful tool to gain insight and bolster validity (Maxwell, 1996). In this case the statistics, in particular word count, tell a compelling story as to the complexity of the data. The following is a chart showing the number of words used from each original respondent’s transcript in each of the four meta-stories. To give context to this data, I would like to remind of the procedure through which the meta-stories were built. The clean transcripts were sectioned and organized into like themes. These themes were then grouped around the four emotions. Content of the text as grouped by theme, not original speaker, was the only consideration during building of the meta-stories.

Given this process it is surprising to find the spread of data used across original speakers and subsequent stories. Specifically, 7 participants were used in at least 3 of the four stories. The appearance of participants across so many stories is an indication as to the complexity of the original transcript; that no participant was narrow or limited in the scope of topics they chose to address and the emotions which they expressed during their interview. This conclusion is bolstered by the fact that, on average, 15% of each of the 16 respondents’ original text was used in the subsequent meta-stories. Thus, implying a fair and equal representation of all voices. This is despite the fact that exclusively content, not speaker, was the only characteristic upon which the stories were built. The color-coded text (see appendix) also shows the frequency with which multiple original speakers were used together within the span of even one paragraph. It can be concluded that the original transcripts were so diverse and complex that each story was able to have a meaningful impact on the whole.

However, it is also clear that three of the stories were more heavily influenced by a particular participant. This supports the more intuitive assumption that there are generalizable tendencies to each person’s experience. Additionally, this is also a reflection of my experience as the listener to these stories in showing that these individuals made a strong impact on me through their telling and emotions and thus influenced the way in which I subsequently structured the meta-stories. An interesting designation here as well is on the basis of gender. The statistics show

	PROUD	APPREHENSIVE	APATHETIC	PRUDENT	Total USED	Total SAID	Total % USED
David	1,362	34			1,396	4,476	0.312
Linda	175	121		322	618	2,162	0.286
Paul	123	160	237	106	626	4,329	0.145
Clark				253	253	4,381	0.058
Mary		288			288	2,863	0.101
Dane		40	26	297	363	3,610	0.101
Pat		305	459		764	4,409	0.173
Rose		1,171			1,171	4,369	0.268
Greg	680	103	291	116	1,190	6,725	0.177
Sue		180	80		260	3,143	0.083
James	39		363		402	4,188	0.096
Luke	154		56	252	462	3,818	0.121
Tess		145	41	1,159	1,345	5,967	0.225
Mark	440		22		462	3,271	0.141
Kim	21		142	100	263	2,876	0.091
John	42		180		222	2,958	0.075

TOTAL	3,036	2,547	1,897	2,605	10,085	63,545	0.159
MEN	2,840	337	1,175	1,024	5,376	37,756	0.142
%	0.935	0.132	0.619	0.393	0.533	0.594	---
WOMEN	196	2,210	722	1,581	4,709	25,789	0.183
%*	0.079	1.059	0.464	0.740	0.570	0.495	---

*with x 1.22 multiplier to account for the underrepresentation of women in the participant group

that the four stories varied in the percentage of text stemming from an original male or female speaker. While the data here cannot be considered conclusive, it speaks to the conventional assumption of gender differences in the expression of emotion.

The presence of complexity in the data speaks to the value of narrative analysis as narratives allow for increased richness and detail (Hyvärinen, 2008). It is my opinion that recognition of the complexity of the tellings of the participants is vital to the ability to accurately contextualize this data and that this depth of analysis would have, and has been, missed by other research methodology applies prior in this field.

Themes

As stated, the preceding theory as portrayed in the Framework, can be organized into five key themes: society, generativity, barriers, emotions, and identity. These themes will be expanded upon below through examples pulled from the storied data and connections made to the academic insights from previous researchers. The five themes were ordered deliberately as they are seen, in my opinion, as building upon one another. While from different, and often unrelated areas of research, the following section will show how they are interrelated in their impact on the relationship which NDNs have with technology in the workplace.

Society

The three societal trends of digitization, an aging population, and an increasing retirement age can be seen back within the stories told by the respondents. While the aging of society and an increasing retirement age may be seen as questions of statistics and government policy, the references that the respondents make to these issues speak to their probative value in the lived experience of the individual. Respondents, such as the narrator of Prudent, recognize the changes which have taken place, and the unique perspective which it gives her on old vs. new.

“You currently have the generation that did experience the way it used to be, that saw the advantages but also disadvantages, and now participates in these new changes. And that is what I mean when I say we used to know a different way... I think that once

you lose that, our generation, then it definitely will become a totally different story. Then new is just new” (Prudent, p. 39).

In advance of the extent to which digitization can be seen in the workforce today, there were a variety of smaller steps in technological developments. Within the span of just one person’s career, an employee can go from sitting behind a typewriter to coordinating with colleagues from around the world via Skype. The U.S. Census Bureau statistics support the vast expansion of access to computer technology, as does the research that employees use on average 4.7 unique forms of technology per week (Patrizio, 2016). I myself vastly underestimated the recency of the transitions in the technological timeline. Two main trends within these changes are capability and speed.

With capability I mean to refer to the making possible of things that were previously impossible; the ability to make corrections to text on a screen as opposed to typing out a handwritten document on a typewriter with carbon paper behind it and correction tape to fix mistakes, the ability to directly make an international phone call without needing an operator, the ability to print text in bold, the ability to open multiple applications at the same time. These are all things that at the beginning of each individual’s career was not possible; some potentially even unimaginable. We now often take for granted all that technology is capable of. Not only do we take capability for granted, we take speed for granted. Respondents referenced example such as sending a letter taking up to 5 days, or that the instantaneous nature of the fax was miraculous in its ability to send data from one side of the world to the other in a moment. That “he hasn’t been in” was an acceptable response to a 3-day old unanswered message was hard to place in my 2017 perspective. The assertion is that this estrangement in frame of reference between generations leads to disconnect. A disconnect which then in turn affects the generative ability of the older worker.

Generativity

As stated by Sanders et. al. (2013) generativity is the human desire to contribute, to feel productive, and to avoid stagnation. However, in such a rapidly changing and digitizing climate, the value and definition of knowledge in the workplace is changing. These feelings of diminished value or skill obsolescence, as older workers are more likely to be affected by (Karpinska, 2015), can be seen back in the data.

The narrators recognize that they are “of the generation that you have seen people really get pushed out” and are now sitting unemployed thinking, “have I worked all these years for nothing?” (Prudent, p. 38). It is recognized that the work they did has changed so dramatically that they are pushed out due to the perception that they can no longer contribute. However, the company culture and the timing of these changes impacts the ways in which they are perceived. In Apprehensive the narrator talks about the impact of changes in information accessibility and her perspective on what that means for future generations.

“The downside is that there is such an overflow of information that it makes it hard to find things back. All of the information sinks into a pit and you never get it back out. I still really like hand written to do lists. I need to see it. If it is all in folders in my PC, no matter how well organized I am. It feels gone... Ok, everything is in the computer, but in that way you miss a lot of real knowledge. You notice those types of things when working with younger generations. They say, “we’ll look it up.” And I feel like, but if you are sitting in a meeting and a question is asked of you, you can’t really say, I’m gonna look it up. Then the expectation is still that you have that information top of mind” (Apprehensive, 32).

She has a preference for physical to-do lists and the importance of ‘real’ knowledge, because that is the work culture and working style which she is accustomed to. By implementing the life-course perspective to guide the analysis of these preferences we better recognize the relevance of “time, context, and process” (Elder, 1995). The timing and sequencing of these changes in her career are thus pertinent to their perceived consequences. The narrator of Prudent aptly gives such an example.

“So if you are getting older and the number of changes is increasing, because it really is happening faster than before, then it just hits you twice as hard. More changes in more different ways and you are getting older so that combination, it just, it is a lot” (Prudent, p. 39).

In this text she explicitly references not only the two independent variables of age and change but the “combination” of the two that “hits you twice as hard.” While the inter-generational transfer of knowledge has invariably been a part of society, it is the current speed of technological development which has led us to this

“generativity crisis” (de St. Aubin et. Al., 2003 in Sanders et al., 2013) due the barriers which NDNs experience in the acquisition of new technical skill.

Barriers

Multiple respondents referred both explicitly and implicitly to barriers which they, or their generation, experience when looking to learn new technology. In one story, for example, we see the narrator explicitly mention trainings which they followed (Prudent, p. 27). This parallels the work of Saunders (2004) in the research to determine the most effective training methods for older workers. However, the data shows the perspective of Birdi and Zapf (1997) to be more thorough given the attention for the emotional response of the user as is seen in Apprehensive.

“Now we kept getting all of these trainings for computer skills and somehow, I followed all of these different trainings and I just couldn’t really make it my own. I didn’t see the accessibility and the options. And maybe for you all that is very normal, but you just don’t dare to press on all of these different buttons because then you are afraid that everything is going to be gone and it really stresses you out... Now I am often afraid that if I try something that I am just going to break it or that it is going to get stuck or that I won’t know anything anymore of what I am doing or that I will have lost information. So that holds me back... I don’t always find it to be a step forward. I notice it myself, that I really had an aversion to all of the things that they started to want to do digitally. It’s not my way of working. And it just doesn’t resonate with me. It was like it just didn’t stay in my brain... Sometimes it is not a question of whether or not you do or don’t want something, if you just can’t” (Apprehensive, p. 31).

This powerfully emotive narrative give insight into the experience of an NDN when faced with such a computer error. The narrator experiences these new technologies as something that literally does not feel like it is possible for her to acquire. As per Attribution Theory, she places the source of the barriers she experiences not on her own personal effort but on that fact that it is not her “way of working.” In this way she exhibits alienation manifestations of Learned Helplessness (Turner et al., 2007). In Proud we see a similar confrontation with barriers to acquisition of technical skill, manifested through the identity form of Learned Helplessness.

“I’ll do so much, but at some point it becomes someone else’s specialty. I rely on the system to work for me rather than going in and making the system my own. I can do

various things. The basics. Which is fine, because there are other people for whom that is their primary job responsibility. I don’t feel like I need to know everything any particular device or software” (Proud, p. 27).

He can be seen as overcoming the barrier by simply avoiding it. He recognized the problem but attributes to cause to the fact that it is not his responsibility, thus there is no need to modify his behavior. These emotionally adverse experiences with technology at work can be seen as contributing to the low computer self-efficacy which some of the respondents displayed. Though closely related to Learned Helplessness, CSE is unique in its reference to “judgment of one’s *capability* [emphasis added] to use a computer” (Compeau & Higgins, 1995, p. 192). For example, as a results of perceived low CSE, the narrator of Apathetic avoids a problem with his website all together.

“My old website didn’t work anymore. It was made on a system that was never really search engine optimized. But I didn’t know how to do that, I didn’t know anything about that, and if I had to start from scratch then it would have cost me a lot of money so I just left it” (Apathetic, p. 33).

This deflated sense of skill and self-esteem only works to exacerbate the perceived distance between the individual and their goals. CSE is a matter of *perception*, not fact. Yet the emotional repercussions affect not only their technological world, but their emotions at work as a whole.

Emotions

As stated, the four meta-stories were built around the four types of emotions displayed by employees at work: attachment, individual, self-image, and cognitive emotions (Poggi & Germani, 2003). While the stories themselves are intended as a representation of the impact of these emotions, it is important to note that pride, apprehension, apathy, and prudence respectively, are not intended as representative of the entire range of employee emotions. Each of the four types consists of a vast array of variance which no one data set could fully portray. Additionally, as stated by Poggi and Germani (2003), it is also recognized that emotions can fall outside of or in-between these categories. This complexity is also portrayed in the divergence of the quasi-statistics. The fact that the original text from many respondents was used to portray multiple emotions in the meta-stories

shows that we can also not expect any one employee to fall within one emotion, or even one type of emotion category.

How individuals perceive and process these emotions at work is influential as to their own internal dialogue. In the Apprehensive story for example, the narrator expresses what she feels are the consequences of the anxiety she, and her colleagues, experience in the workplace.

“When that got implemented it was not just something simple. And then people asking, “how do I do this?” Or, “I don’t dare to do that.” Or they would just not report because of it. And there really is a lot of anxiety. I feel like that is really underestimated. For the elderly, and in their community, there were computer lessons, but for the group of people that was 45 to 55 there was nothing for them. They just from one moment to the next had to use it on the work floor. If you don’t get it then you feel like you have been dropped in the middle of Tokyo. And that really causes panic and stress. All of those alerts and messages when things go wrong definitely do create this anxiety culture” (Apprehensive, p. 30).

Under Affective Event Theory, she explicitly calls out alert message, for example, as the cause of panic and stress. She then herself interprets and processes this cause under Cognitive Appraisal Theory, leading to her own emotional experience (Basch & Fisher, 1998). After first experiencing and then processing emotions at work, the final question is as to how an individual chooses to act or manage those emotions. Just earlier in her story she talked about managing her emotions by refusing to participate in the system.

“Sometimes it made me feel like I was stupid because before this I had always just done it. You look carefully at what you need to give, and you sign the paperwork... And sometimes I find that it really does go too far. Because things are digital and then you have to do these things here and there and there and it feels so bureaucratic... It just gets pushed through, but nobody asks us if it actually works. And in that way sometimes I can be a little bit stubborn, I just boycott it. I am not crazy, I just stopped doing it” (Apprehensive, p. 29).

She chooses to take the situation into her own hands and not conform to the expectations of management. In the words of Morris and Feldman (1997) she refuses to engage in role internalization by not incorporating the organization

demands on her real identity. This is how she has chosen to manage the emotions which she experiences in her workplace.

Identity

Lastly, we take all of these variable and context related to individual experience and look at the impact that it has on the identity of the NDN. For the interest is more than simply, what happened? The “so what?” question is, how do employees assimilate all of this information into their sense of self? Watson (2008) analyzed the concept of identity work, the efforts taken by the individual to correlate social-identities with their self-identity. But first, his argument for the connection with Wright Mill’s sociological imagination rings true here as well. For example when the narrator of Proud references the first time he heard about the internet.

“There was a time, 27 years ago max, there was woman whose husband was a professor and he was offered a guest lecturer position in Boston and she wanted to go with him. She was a researcher, and she said, “I can go because if you all get a subscription to this thing.” The university had the same system and it can communicate with each other, and if we all also had the subscription then she could communicate directly with the company while she was gone. And we all thought, “That is ridiculous. Why don’t you just call or send a letter or something?” And what was it called? It was called, internet. We all thought it was ridiculous. We have to get this subscription just because she wants to go work from halfway around the world? A year later, we all knew what internet was and how it worked and what it would be able to do. But at the time, she was telling us about it and we had all never even heard of it” (Proud, p. 25).

Yes, he is explaining about the impact of a technological development, but the impact, as we now know, is much greater. Watson (2008) warns against reducing the analysis to purely what is happening within a person’s mind. By seeing this reference to internet in the context of globalization, an international workforce, and ease of communication and sharing of data we see that the narrator’s identity in his work is being shaped by much more than the fact that a colleague is going abroad. That is the powerful impact of considering the lens of Mill’s Sociological Imagination.

It is important to remember however, that the technological identity of these respondents, while impacted by history and context as argued by Watson and Mills, is convoluted by the negative connotation associated with NDNs. To be

technologically inept is stigmatized, but it is an identity which people can choose to hide. DeJordy (2008) showed us how the decision to “pass” in an organizational context can have unintended and negative consequences. Examples in the data of respondents performing these stigmatized identities include the narrator in Prudent.

“If that anxiety is there then it is really difficult work. For me for example, with Excel... I can use it, but I can’t actually make them and I have very consciously decided not to bother... learning anymore, and I’m not bothering anyone. Sometimes maybe it is inconvenient for myself, but then I find a different document and enter the numbers into the old spaces and you get very creative in your problem solving in that way. But our finance guy for example... has a very specifically formatted need for information. But there is no room for people who don’t fit into his system. So what he requires from me is that I conform to his system. What happens is that I get pushed into his system of expectations... And these are symptoms of something deeper in the communication. That you aren’t seen as an equal” (Prudent, p. 38).

The narrator recognizes the identity difference and the steps that she herself has taken to accommodate her own needs. She “passes” by functioning in a system which she doesn’t truly understand by utilizing her creative problem solving re-using old Excel documents. Then however, her invisible NDN identity clashes with the visible and dominant DN identity when she is forced to collaborate with the finance employee. Maintaining self-esteem and coping is seen as one of motives for addressing, or not addressing, these Invisible Stigmatized Social Identity (Claire et. al., 2005). The narrator displays her frustration to me, but chooses to “pass” in her work place. The effort that this costs her demonstrates the identity work she is engaging with to correlate two contending identities. While identity work is partially an internal mental process, it is expressed to the world through, among others, narrative events. Engagement in this identity work is unavoidable (Watson, 2008), and narratives are thus examples of moments when any individual can explicitly mold their identity through their interaction with others.

Interaction

While social scientists are not in agreement on the specific definition of what a narrative event is, there has been a trend within narrative analysis away from the

formal Labovian Model towards being a new way to theorize about the previously too static concepts of self and identity (Hyvärinen, 2008). This approach which takes narratives more as a “sense-making process” (Ochs and Capps, 2001, p.15) is the basis for the focus on interactional analysis as opposed to thematic, performative, or structural (Riessman, 2005). Given the relational aspect of this research, the following analysis will be demonstrated, in large part, through the effect which the narratives had on me as the listener. The storied data of this research was collected in an open and collaborative setting. The interviews were not structured, and the respondents and I both participated in steering the topics discussed. This symbiotic process between teller and listener became the basis of analysis. Thus, the relationship which I have with the respondents came to play a central role.

Expectation

When any two people are speaking they expect the other to respond, to listen. The data of the narrative events presented here were no different. By analyzing the expectations that the respondents had of me as the listener it becomes clear that their goal in portraying their stories as they did was different from how it would have been if they were sitting in an empty room in front of a tape recorder. My presence, and more specifically my relationship with the respondents can be seen, for example, through Deborah Tannen’s “evidence of expectation” (1993).

Unfortunately, due to the built nature of the meta-stories it is not possible to accurately reflect each of the instances in the original stories. However, my experience as the listener is relevant here, and the impression which the respondents made on me with their behavior was clear. Participants often used contrastive to indicate a perceived contrast between my experience and their own. In the Proud narrative the phrase “You can’t even imagine” is used four times, demonstrating a presupposition that my experience is so divergent from theirs that I would have difficulty empathizing. Additionally, the narrator in Apathetic uses repetition in the use of “do do” when referring to technical skills which he does engage in. It appears twice in the built text and 11 times from 4 different speakers in the original transcripts. In context, these participants were making the point that despite their lack of affinity with technology, that there are some skills and tools which they do engage with. The expectation that this is thus evidence of is an

assumption that I, or they themselves, believed them to have no technical skill and these “do do’s” were presented repeatedly to dispel that myth.

These, among others, explicit examples of Deborah Tannen’s evidence of expectation are symbolic of the interaction which took place between myself and the respondents during the interviews. Additionally, the respondents often asked me questions about my experience or opinion during the interview. While likely also provoked by my personal relationship with the respondents, this type of behavior is uncommon in traditional interview settings thus maintaining the analysis that these narratives were particularly interactive.

Empathy

I feel that millennials have the inclination to only think about technology as something with a future and not something that also has a past. We are only looking at the next development and what that is going to bring and forgetting to acknowledge where it came from. At least in our everyday use, new becomes normal so quickly. For us the new is the only option. But for others who were used to a different normal, new is different, and new is not normal. New gets compared to the old and new gets experiences through the lens of the old not through the lens of it only for what it is. Thus, with empathy in this context I am referring to the intergenerational ability to understand where the other is coming from in their relationship with technology. What are the causes, effects, and symptoms of this understanding or lack thereof? With expectations we looked at what behavior the respondent participant exhibited in an effort to interact with me as the listener. Here I would like to ask what I, and DNs in general, can do to interact with NDNs by empathizing with their experience.

There were clear moments when the participants brought up notions of generational differences. That the experience for the “next generation” will be different, finding it easier to go the “younger generation” to ask questions about how things work, that there is a “whole generation” that doesn’t know any better than always being reachable, or most poignantly, expressing being “jealous of the younger generation.” Such explicit references to generational differences feel like they dissolve hope for empathy; that the differences are too salient and great to be able to bridge. However, I believe the silver lining to be this visibility. The fact that these generational differences are tangible means that they are (or feel) real

and thus there is hope that they can be addressed. There are many moments when participants describe not only how things are, but in contrast to how they experienced things to have been. The context of particular examples in the timeline of technological developments is tantamount to relevance of the description of the distinct example. Participants frequently used terminology to imply a recognition of change over time. Moments when technology “created” something, awareness that something had been “lost”, or references to “before” and “now” imply the participants as trying to make a point by indicating contrasting situations over time. The presence of these contrasts again makes the case for the need for empathy to bridge the divide between groups.

I believe that the opportunity now lies with us, my generation. I have been given a gift hidden inside of these stories. My family and friends trusted me with their narratives and I feel like I now have an opportunity to take action. I am drawn back to thinking of generativity and the opportunities that we can create for NDN to contribute to their workforce by taking the time to empathize with and honor their experience. Despite the view that NDNs are technologically inferior, there is still a lot that we can learn from them because each person’s story is relevant, unique, and powerful.

Conclusion

So where do we go from here? It feels like a momentous task. Just another thing to worry about discriminating again people about, right? Wrong. The hope was to validate and humanize the experience that non-digital natives have with technology. By sharing with you these stories I hope have shown that they are in fact relevant, unique, and powerful. It is this realization that I would like to champion moving forward. I am of the opinion that by taking the following four steps we, both the business and academic community, can benefit from these experiences.

Ask

While there are many different facets of human experience, the unavoidable truth of technology is its increasing ubiquity throughout society. Because of its presence and power in our daily lives, it is even more important to understand how we each vary in relationship to it. Our comfort with digital language is just as vital to our ability to communicate as our comfort with spoken language. We would think it

totally reasonable to ask questions about someone's past when we hear that they have an accent. It is one of the first things that we ask if someone does have an accent, "Where are you from?" It's important to us because we are curious and consider it vital in the way that we communicate with each other. So how is it that we don't ask the exact same questions in a different form in a different language, when they have a digital accent (Prensky, 2001)? Such a digital accent can have just as important of an impact on the way that we communicate with each other. I propose that by creating the space to be able to acknowledge these differences we can actually put people more at ease. When people hear me speak Dutch they think that I am native because they don't hear my accent. But what they don't know, is that I am not. But when I have the space to acknowledge my Americanness it puts me at ease in a way that gives me more flexibility and space to express myself rather than having to focus on hiding the parts of myself that I don't want others to see. The same is true for technology. By taking the time to ask the question we create the space for others to feel more comfortable to be their authentic self.

Listen

But it's more than simply opening the door, you have to be ready to step through and truly be present. Sitting down to hear these stories was in many cases the longest and most intimate conversations that I had ever had with these people. I genuinely enjoyed having these conversations. It felt good and important, and I never would have heard these stories had I not explicitly asked. I loved watching people light up as they shared stories of past accomplishments. We often forget to take the time to understand each other's histories like the different types of job responsibilities that they have had, but what I experienced was that when I did it made me see people differently in the span of just 60 minutes. Everyone has so many stories to share, yet we never really seem to make or take the time to share them. Society as a whole for hundreds, if not thousands, of years has revolved around stories (Atkinson, 2007). So when is it that we stopped telling them and started trying to fit them into 160 character tweets thinking that we could still portray our humanity? By focusing on stories and lived experience, by seeing people for who they truly are and all of the baggage that they bring with them, we can enrich our relationships and thus engage in better collaboration.

Respect

By respecting and honoring what non-digital natives have to say we can support their agency with technology at work. Multiple participants came into the interview worried that they wouldn't have anything to say on the subject but they did! The people who focused on all the things they didn't do seemed to have failed to acknowledge all that they were capable of and the multitude of ways which digitization had already fundamentally changed the nature of their work. The search here was not for "objective" truth, it was for the meaning given to lived experience. Thus all memories, "true" and "untrue" are valid, relevant, and to be respected. If we put people on edge, making them feel like they are being judged or graded, if we approach a situation saying, this is the bar, I am going to check and watch and make sure that you meet it, then we are not going to give people the space to show the power that they do have, the skills that they do have, and the contributions that they can make. By having these conversations we open up the playing field to a larger span of experience. That diversity allows us to better navigate the changes in our workforce and economy.

Integrate

Employing this strength of diversity thru a truly integrated workplace will allow us all to thrive. For where there is no diversity, there can be no change (Boulton & Allen, 2015). I believe that the solution is integration not assimilation, for to expect NDNs to think and act as DNs would be an oversimplification of their experience and disrespectful to their reality. Even the simple act of storytelling can begin to build a bridge. Storytelling is healing and allows both the speaker and the listener to reflect and experience empathy and compassion (Rossiter & Garcia, 2010).

What I hope to have portrayed in this document is the need for adding this perspective to the current body of academic knowledge in this field. It was hard enough to find qualitative and/or interview based research on this topic, despite the plethora of literature since it started to become clear the impact that technology would have on our society. We seem to think that technology is the solution and anyone who stands in its way in the problem. I encourage us to problematize this view of digitization. View it as an option we are consciously choosing to follow because it is the most beneficial for society as a whole. It is vital

that those of us with the privilege to have been born and raised digital natives, retain the humility to understand that we are the exception and not the rule. What we have been given is because of those who came before us. It is important that we respect the past and not forget the importance of putting things in perspective.

These 'results' are not esoteric cases; they are accessible to everyone willing to ask the questions. While I hope that my readers appreciate the care and structure of my academic approach, the true goal is that they see the value of understanding these stories in their own workplace. Few people in today's economy have been left untouched by the trends of digitization, an aging population, and an increasing retirement age. As the research on computer self-efficacy shows, there is a distinction to be made between skill with technology and comfort with technology. Teaching someone the right buttons to perform an action does not make them native. Likewise, it's reckless that we invariably assume all digital natives to be fully comfortable with technology. I believe that a difference in technical skill between people in future generation will continue to persist as does for any human skill. The problem is that while people can self-select work or cultural environments which match their particular skills, the world is digitizing ubiquitously across society. People can no longer self-select themselves out of a digitizing field. So, how should we be approaching this problem of a fully digitizing world with a not fully digitally competent population?

The problems being addressed here are not something that happens once to one generation and then "goes away." Technology is evolving at an exponential rate. It would be cavalier to think that the Baby Boomer generation will be the last to experience such a transition in the nature of work. By exploring the theme of intergenerational empathy for the lived experience in the workplace we can add to the positivist data driven research which currently monopolizes this research area. The proven strengths of narrative analysis and storytelling will be able to broaden how we problematize the convergence of these three trends. The challenge which I give to the academic community is this; How can we step away from the positivistic assumption that technology is a hurdle to be over won and instead validate and utilize the diversity which exists within the spectrum of relationships people have with technology in the workplace?

Epilogue

I find myself asking, “so now what?” Ok, we had fun talking to people. It was interesting and educational, powerful, and quite honestly, pretty life changing. But in 2017, with all the pressure to do more, better, in less time, does that mean we just box it up and move on? When I started this thesis, I knew that one of my main goals was to not waste 6 months of my life on a project that I would never do anything with again. So, what am I gonna do with all this?

The more I talk to people in my life about this topic, the more passionate I feel about how important it is that we make room for these types of conversations in our everyday lives. So I started reflecting about who I wish that I could talk to, and I came up with two names. James and Elizabeth. *

James is my second cousin only just starting to explore the adventures of elementary school. He is a curious, adventurous, and boisterous bundle of joy and I found myself wondering what his professional life is going to look like 15 years from now. If this is already how I feel now, what is 2032 going to look like? And what could I tell him? Share with him? Warn him about?

Elizabeth was one of my supervisor at my first “real” job in college. She was a kind but critical, wonderfully smart and wise woman, and she refused to digitize. Our office was transitioning to a paperless system, yet she still wanted us to print, and then scan, all of her work product. I for the life of me, felt like I could not understand her position.

On the next page you will find two fictional letters which I have written. They are not intended to be academic or “proof” of anything. They are me trying to figure out what comes next. What does putting this knowledge that I have learned in the last 6 months into action look like?

Here goes nothing...

** While based on real people, these names and characters have been fictionalized to protect anonymity.*

Dear James,

I have no idea what your future is going to look like. But I do know that when you were less than 2 years old you knew how to unlock your dad's iPhone. I know that you have never known a time when you couldn't watch whatever movies you wanted at will on YouTube on your iPad.

The message that I hope to give you is an appreciation for perspective. Please always remember that while technology is beautiful, and powerful, and life-changing, it is by no means natural. In the grand scheme of human history, it is but a blip on the timeline and it has changed the face of society in less than a generation

Please never stop asking these questions of everyone around you, but more importantly those who came before you, to understand their lived experience. For Google'ing a fact will never replace the experience of asking someone for a story. For the young, new so quickly becomes normal. But for others, new stays just that, new. It is forever seen through the lens of comparison of what came before. Comparison with the new that had become normal before this new that is now again trying to take its place.

Yes, technology is a question of rules and protocols. It is software and systems that do or don't replace or improve our work depending on who you ask. But at its core, technology should facilitate not guide the way that we communicate with each other. The end goal of everything that we try to do together as society is to build relationships with one another. And the way in which you do that, the difference between a WhatsApp message or a Skype call or a face-to-face conversation or a virtual reality hologram, it matters and it affects us. Please don't underestimate the impact but also the power of what came before. Never stop asking the hard questions and please always take the time to look someone in the eye and say, "Can you tell me about a time when..."

I love you and I am so excited to see how you are going to take on the world.

Love always,
Simone

Dear Elizabeth,

From my very first day in the office I respected you, and was pretty intimidated by you. I was 20 with no "real" employment history to speak of, and you had been working at that job in that office for I think literally longer than I had been alive. It seemed that there was no one on in the organization whom you didn't know.

While I appreciated your wisdom and your experience, I didn't respect it, and for that, I am sorry. You don't know this of course, because I never said it to you, but I want to apologize for failing to take the time to empathize with your perspective. For making jokes behind your back instead of asking you what you felt the difference was between paper and digital and why you declined to transition. You had so much knowledge to share, yet I let this one thing color my view of your capability and professionalism.

When it came up, I loved hearing all the stories about how things used to work in the organization. And that one time we found that old picture of you and Suzanne with 70s bell-bottoms in the office was too funny! I look back fondly on our time together, and I know that we had a good working relationship, but I also know that it could have been better. I know that had we taken the time then I would have been better able to help you and you better able to help me. I regret that we missed that opportunity.

I wish you all the best and hope you look back with pride and joy at your countless years of dedication and service. You affected not only our clients, but the countless young employees like myself whom you mentored and guided.

Thank you,
Simone

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Appendix

This appendix is intended to increase transparency and accountability for the story building process by providing the meta-story text with its original color-coding to indicate the original speaker of each section. It should be noted that while the color-coding may convey that a certain segment of text is original from the indicated speaker, it is likely that the content was still built but from pieces of the same interview and thus not visible in the color-coding. This is to say that the visualization of the color-coding cannot fully portray the extent to which the stories were built.

8 different colors were used (light blue, dark blue, light red, dark red, light green, dark green, purple, and yellow) in one of two font types (italic or bold) for a total of 16 unique combinations, each assigned randomly and anonymously to one of the 16 respondents. The words in black were added by me to facilitate clarity and/or transition between different text segments.

David

With some things I did have some difficulty. Because I started really from nothing with computers. They didn't even really exist at that time. We had these really really big computers that would take up a whole room. And in the office you didn't have anything. Then we had lines, data lines, to the different locations and at the end of the line there was a terminal. You had to sign up, in a department of ten or twelve people you had a terminal room and terminals were, you can't even imagine. They were these massive things. You had to sign up once you think that you are ready to program a certain something then you had to sign up for a specific time slot, and if you were lucky then you were done during that time period and otherwise you had to sign up for another timeslot. So that was a phase that we went through. Just a couple of terminals per department.

Then a couple of years later, maybe just two or three years later, sometimes it is so fluid that you don't even notice, but slowly but surely it went to one terminal per person, your own terminal. Later on you got this weird little green screen. These tiny little computers. And that was big progress. But you also wanted to have images or visual diagrams of your system. And all of that was so clumsy. With these difficult characters and with a lot of effort eventually you could make a diagonal line or whatever. And then you had to press print and you had to go to the print department where you could pick up your print. Ya, there was a central printer. You can't even imagine. You had those internal mail systems that would process all of those prints, because you would have a cover letter with the name of the person who printed it and the office where they were sitting. They would sort all of that and bring it to all of the offices. It was really quite ridiculous.

*Then the PCs really started. So we are talking about maybe in the early 90s. At first I had no idea what more you could even do with it. I didn't understand. But there were all off these word processors on it. Word Perfect, maybe you have heard of it? It was one of the forefather of Microsoft Word. And that was such a big deal because then you could write normal texts with it. Because before, even if you just wanted to write a title on your document you needed to use all of these special characters like *[] and B for bold and then you had to close it and you didn't actually see it on your screen as bold. So it was really unclear what it would actually look like. So first you have to make this test print and then you think, "Oh ya, it looks like that."*

Eventually things started getting faster and faster. It is like people have less patience these days. Definitely seems like something of this time. It used to be the case that when you would turn on your computer that you would go make yourself a nice cup of coffee. And after 10 minutes or so it would finally be ready for you to get started and you didn't think that was weird. But you can't even imagine that anymore. But that is years ago.

If you went home, it was not normal that you had one at home too. They actually had projects, "Home Projects" they called them, to get people using computers at home. The boss would pay for it, or part of it, because the idea was that if you used a computer at home then you would feel more comfortable using it at work too. That was the philosophy. They really needed to get people out of their old way of working, and to a new one. And because not everything is there and possible right away, then people keep holding on to their old ways whether it's paper or land line phones or whatever. At a certain point when you noticed that you could open multiple applications at the same time next to each other. In the beginning it was the case, the first computers you only had one application open. And at a certain point you can open 3 or 5 at the same time. And you could copy/paste pieces of text from one place to another. And that was, that was very easy. I am definitely someone who is very geared towards productivity. And the moment that something can be done easier, count me in. if it doesn't diminish the quality of other things then I am definitely a proponent of using it.

There was a time, 27 years ago max, there was woman whose husband was a professor and he was offered a guest lecturer position in Boston and she wanted to go with him. She was a researcher, and she said, "I can go because if you all get a subscription to this thing." The university had the same system and it can communicate with each other, and if we all also had the subscription then she could communicate directly with the company while she was gone. And we all thought, "That is ridiculous. Why don't you just call or send a letter or something?" And what

was it called? It was called, internet. We all thought it was ridiculous. We have to get this subscription just because she wants to go work from halfway around the world? A year later, we all knew what internet was and how it worked and what it would be able to do. But at the time, she was telling us about it and we had all never even heard of it.

In I think 1986/87, before we all got our own desktop, there was one computer downstairs in the library, in the Information Center, and that one was connected to the internet. And there was this librarian and she said, "Look, you do this and then you can search for something." And we really thought, "How is this possible?!?", but you also had this feeling of, "What will I ever need this for?" because what you had really just looked like an encyclopedia. Ya, how often do you use an encyclopedia at work? Never. So, ya, the first thing that you really saw of the internet is that you could search for things. I still remember that I thought, "What do I do with it? It's fantastic, but what do I do with it?" But that didn't take that long. As more applications became available, and more sources, the more you think, "Oh, I can look for that too." But at the beginning, there really wasn't anything. There were no data files, no address files, all of that wasn't on the computer, it was still on paper. So when I started with the computer, it was actually just a fancy typewriter.

We originally had offices with our own workstations, but when computers went mobile and wireless we transitioned to flexible workstations. You didn't have your own office anymore, you just had a place to sit and work. Your bookcase and everything needed to go paperless. People used to have two big bookcases full, but now they just had a tiny little thing with a couple shelves, and everything had to fit. That was really a big transition. There were people who didn't sleep because of it. I personally didn't have that much of a problem with it. Actually, after one day I already found it to be more fun than sitting in separate rooms. We used to have closed rooms with hallways and behind every door there were 2 or 3 people at their own desk with a picture of their wife and kids and big bookcases. All of that had to go. That was really a big transition.

I remember that people got uneasy and they felt like they couldn't work and they missed the support of the bookcases and the folders and that it all wasn't there anymore. Everything had to go digital. And you have to transition out of the time that everything was on paper. Everything was on paper.

They had support for you. There were people from the information center who would come and look at your bookcase with you. They would say, "All of this can be scanned in and digitized and then all of binder can go." "The binders can't go!" people would say. But they had to go, or you had to take it all home. But then you couldn't work with it of course. A colleague of mine, she should take two grocery bags full of binders to and from work every day. She kept it up for years because she really felt that she couldn't work without all of those papers and folders and post-it notes. I would ask her sometimes, "And have you opened the bags yet today?" No she hadn't. She didn't actually use it of course, because everything was becoming more and more digitally accessible. If you look back it's pretty funny actually.

There were some people who weren't even 50 yet and they were already exhausted from all of the digital. Which at that time, was basically nothing if you compare it to everything that is happening today. Not everybody approaches it in the same way. Not everybody thinks that it is an interesting challenge. For some of the simpler people that didn't really go to university, it might really just be too much for them. I am personally of the impression that everything that you can digitize, that you should digitize. You shouldn't not digitize something and leave that behind. I am completely convinced. Some people refuse to participate in the system because they find their own work to be more important. They tell the board that they are going to do it, but then they just don't. And they can keep that up for quite a long time. That is really something that has been an issue the last 5 or 6 years. That the system is built in such a way that everyone has to participate but not everyone does. But you know, I have always found it fun. I never really felt any resistance toward automatization.

I feel like the differences just have a lot to do with who you are and how you think. I do notice that the older employees sometimes just dig their heels in and they don't always believe in all of those newfangled things.

Before it was just fine. So they are not open to it. They really have that closed mindset. So that does definitely have to do with personality. I feel like they suffer because of it.

The first reaction is always, "But it works just fine the way we are doing it." And you have people who keep this up for a very long time, years. They turn the computer on because it looks good, but they didn't actually do anything with it. Those people really have to be helped out of their old ways. And the new has to prove it's worth. And that will happen just fine as long as you dare to leave the old behind. The bookcases, and the folders, and the paper, and the land lines. People really had to be helped to leave all of that behind. And it only really works if a bunch of people around you are doing it too, and then you really start to see the benefits.

I wasn't a front runner. But I was one of the first who wanted a mobile phone. And they thought it was really obnoxious. They thought that it was really weird. And then I said, "but I am not reachable enough for my clients." Because they would call my secretary, and then my secretary could only call me at home. So if I was out of the house or on the road I wasn't reachable. You probably can't even imagine what that was like; not being reachable. So then it can take three days before I am back in the office and find a handwritten note in my inbox that says, "this and this person called and if you can call them back immediately." Immediately in those days was with a grain of salt because it didn't exist as it does today. Buy ya, no one used such a thing in those days so it was just the two of us in the whole company that used mobile phones. No one else used them. Otherwise you could only call someone at work or at home. You would call the office and then the receptionist would have to connect you through and it was so silly. There were 200 people in the office and all she had to do all day was answer the phones for those people and connect them through. It lasted a really long time actually that she kept doing that. If the client called she would just say, "He hasn't been in." And those were very normal reasons. People didn't think that was weird. I'm sure you can't even imagine. But the entire world, and your work was just organized in this way. But to let that go, it was a huge thing of course.

I can't type well, I had never gotten my diploma for typing. I only started typing in my last job 13 years ago. When I started there I thought, "it is useful." So I followed a typing course via the computer. No one told me that I needed to get my typing diploma, but I noticed myself that it took me a long time. If you learned to type without looking then you notice that it goes a lot faster. So I took this course via the computer and spent 30 to 45 minutes every night practicing and eventually you get better. During the formal computer courses you learn the buttons and where to look and the different systems, but really it's just the same thing every time as the computers develop. But in those first years, if you needed something typed then it would go to the secretaries. And eventually there was only one secretary left who supported the director. Actually now, I do a lot of the things that my secretary used to do. I do it myself now, and I still have more time left over. Kids these days probably won't even have to learn how to type I guess. Definitely it is very useful. If you learn it then you can profit from it for the rest of your life.

Sometimes you have colleagues that come to you and say this or that would be useful for you to use. I personally don't have understanding of all of the deeper technologies, but that is not necessary because I am more on the surface user interface side of the development process. Business and IT. Translating what the business wants to what the actual solutions are. All of the new modern programming languages and all of that stuff. I know that it is there but I am not going to bother to really make it my own. It wouldn't work anyway. I wouldn't be able to anyway. I'll do so much, but at some point it becomes someone else's specialty. I rely on the system to work for me rather than going in and making the system my own. I can do various things. The basics. Which is fine, because there are other people for whom that is their primary job responsibility. I don't feel like I need to know everything any particular device or software. I use it very specifically for certain goals. I am not really interested to actually dive into how that all works so for those types of things, and then I do easily go to the younger generation and ask them, "what do I do?" So it is not really my hobby that I think, "oh it is fun!" I am not the type to be the first to pick something up. I let other people do it first. I let other people really get into the details. I just thought, it needs to work, and it need to be able to do this. That is what the experts were for. But you have

to remember that for a long time at the beginning, the technology was so complicated and so user unfriendly, that it was really only the domain of the experts. They knew how it worked and they would explain it to us.

Ya, in our organization a lot of things break. A lot of things break. It is not super frustrating. It's kind of part of the process. As an organization we are kind of a front runner in the whole digitization process so if we are going to use a new service then you know ahead of time that a lot of things are going to go wrong. So it is all part of the process. And you know, I am realistic enough to realize that the IT gives me a lot and that everyone once in a while you are going to have a time that you have a problem or that you can't work. Ya, that is all part of the process. And you can say, oh shit, I can't do this for an hour, and then you go do something else. Ya, it gives you a lot of new functionality. New options. And that gives a lot of efficiency advantages. And the fact that every once in a while that it breaks, that takes time, and that lessens the efficiency advantages. But that is unavoidable. You can't expect that every time it is going to work. That is not going to happen. At a certain point you have already seen so many of these cycles of changes and new things that you start to look at it relatively.

Linda

In healthcare specifically I often find that digitization is at the cost of personal attention, and that definitely shouldn't happen. We were for example, at a certain moment, so busy with the fact that all of the medications outside of a particular roster, that we had to take pictures of it. And it made me feel really uncomfortable. You had to frame it in a certain way so that it was easy to read, and with the pen next to it and all of these things. And then it went somewhere and then I got an appraisal. Orange was that it was still pending. Green was approved. And then I could actually give the medication. Sometimes it made me feel like I was stupid because before this I had always just done it. You look carefully at what you need to give, and you sign the paperwork. But the fact that you are sitting there looking at your phone instead of looking someone in the eye. I think that is really a loss. And sometimes I find that it really does go too far. Because things are digital and then you have to do these things here and there and there and it feels so bureaucratic.

I really notice that in the last years I think 10 of my colleagues have left because of digitization in healthcare. People of my age that are really opposed to it, that they don't feel like it, or that don't feel like they can get a handle on it. They get pushed out of the company because management is implementing this change and that has to do with politics and health insurance that keeps getting more power and makes more requirements but that didn't used to be the case. It is not always convenient or easy. You don't have a lot of time for it. Normally you just give the medications. You control the information, you look carefully, you sign the paperwork and then you give it to the woman with a glass of water or something else and then you are done. You can't really expect me to sit here waiting to get approval to give a pill. I think it's a weird system. I can really judge that for myself. They see it as an extra control mechanism. And there are certain medications that you need a double control mechanism for that are really high risk. But we had other solutions for that in the past as well. That one person would prep it in the morning and that then a second person would give it. Then you already have a double control. You can search for other solutions. But this I just find so exaggerated. Some people feel time pressure and then they get nervous. I would even dare to say that because of that there have been more mistakes made.

You have a group of people that is really afraid to use the computer, of my colleagues. People who are my age that weren't raised with a computer and they never learned. So you have to learn it all yourself and there was so much fear of computers in my department when we needed to start using the computers for example with the electronic patient files. When that got implemented it was not just something simple. And then people asking, "how do I do this?" Or, "I don't dare to do that." Or they would just not report because of it. And there really is a lot of anxiety. I feel like that is really underestimated. For the elderly, and in their community, there were computer lessons, but for the group of people that was 45 to 55 there was nothing for them. They just from one moment to the next had to use it on the work floor. If you don't get it then you feel like you have been dropped in the middle of Tokyo. And that really causes panic and stress. All of those alerts and messages when things go wrong definitely do create this anxiety culture.

When things cost you more time and you don't see the point, I think that is a lot of wasted time and effort. It just gets pushed through, but nobody asks us if it actually works. And in that way sometimes I can be a little bit stubborn, I just boycott it. I am not crazy, I just stopped doing it. And then sometimes you get an email from management saying, "We notice that not everybody is blah blah blah." Ya, whatever. They force you to use these types of things, and then you lose colleagues. It just doesn't work. It is so irritating. To me that is not progress. It just needs to work. You need to be able to see the advantages of it right away.

I think, because these days there is so much that gets automatized, which also has positive things, like that information is more transferable, but in my time when the automatization started I saw a lot of people had a lot of trouble to be able to submit their reports via the computer because they already had less skills with written expression and that is also not why they choose that type of work. And then I think, there is so much money in these systems and I don't want to say that it shouldn't happen, but people who choose to work in healthcare, they are so exhausted from all of their reports to actually be able to do their work. But I don't want to give you the impression that I want to ban the computer or something. There is just so much that gets lots in that step to digitization. I have met so many people who lost the joy in their work because of it.

But here in the organization we do have systems that have had a really big impact. If I think back, up until 6 years ago, there were 60 employees walking around the halls every day looking for and delivering client files. That is 60 people who earn 30,000 euros per year, and half the time they were just looking for things that were half lost or laying on someone's desk. Then we transitioned to the electronic patient file system and that was an enormous transition for people. From that moment on, every treatment given to the patients needed to be signed off on by a doctor in the system. Before you would just do what you knew to be best because the doctor would think that it was fine if you thought it was necessary. But that was a really big transition.

When I think back, if you had to write something you would sit down in front of a typewriter and then there used to be carbon paper behind it, and for us of course that is very logical but for people who are younger they might think, "What is that?" So that is one of the things that I was thinking about where you just almost can't imagine how that used to go. You really just had to write it all down by hand and then someone from the administration would type it out. In those days it was the secretaries that did all of the computer work for us. They were already the typists, so the computers actually went to them first before they came to us. I think it was in 1985, that was when you first saw computers being used by the secretaries. **But I remember** when I was at the university there were some hallways with specific rooms and they had computers. It was very special. They were these really big computers and we were one of the first departments where they got implemented with zeros and ones and ones and zeros and ones. You know? I remember that. Those were practically monsters. There was this whole room full with all of these devices. Some people thought that it was a challenge to engage with those monsters, but I didn't. The first computer was of course a much bigger transition than all of the fine tuning since then. In the beginning you thought, "That will never be for everyday people. That will just be for the business world." You thought you would never have to deal with it. That is how that goes. **But you really can't compare that to today anymore.**

Now we kept getting all of these trainings for computer skills and somehow, I followed all of these different trainings and I just couldn't really make it my own. I didn't see the accessibility and the options. And maybe for you all that is very normal, but you just don't dare to press on all of these different buttons because then you are afraid that everything is going to be gone and it really stresses you out. I am just not really fast with it, I just forget everything. So every time that I have to think of it again, and I don't always write it down, or if I do write it down then I lose it. I have a vague memory of this or that. But, I just think, how did this work again? And then it is just my own stupid fault. Now I am often afraid that if I try something that I am just going to break it or that it is going to get stuck or that I won't know anything anymore of what I am doing or that I will have lost information. So that holds me back. But when I see the kids they just do whatever and it always works. So ya, I find it really quite scary. I really don't understand any of it. I really don't like it. Sometimes when I try things out I'll eventually find it and go, "Oh I got it!" But then I think, "How did I get here?" I don't know. Sometimes it really makes me unhappy, or

angry. I don't always find it to be a step forward. I notice it myself, that I really had an aversion to all of the things that they started to want to do digitally. It's not my way of working. And it just doesn't resonate with me. It was like it just didn't stay in my brain. Things that I don't know and that I don't use, then I just get stuck and I get stressed and I think, "go away. Forget about it." I don't dare to just try something because then what do you do? I am not comfortable with it. Sometimes it is not a question of whether or not you do or don't want something, if you just can't. If it is not possible for you. If the steps, and the changes, are too big and too far away from what you are used to. It has nothing to do with putting your head in the sand. You literally just don't understand it. I really think it is underestimated. But it is always going to stay problematic. You are always going to have a group of people who fall behind or just give up.

So I think that the first important thing is not too much at the same time. And if you do make changes, really guide people. I would rather have a person that sits next to me and explains it to me, and ideally then another three times. Because otherwise it doesn't stick. That way you won't end up with people saying, "I can't do this," or "that doesn't work," or "how was I supposed to do that again?" But those reasons, that make me just think, "I'll do it my own way." I am more a paper person. That is what fits me best. I guess in that sense I am a bit inclined to take the easy way out. Sometimes I can really be jealous of the younger generation that so easily can just get to where they need to be in a device.

I still can't type without looking at my fingers. I wasn't raised with that. And I have tried to follow those courses, and I did it for two evenings and I thought it was so ridiculous. I thought it was such a waste of time. To really spend a whole evening forcing yourself to do that. And then you really notice that you are not super young anymore. When you are younger you are much more flexible of course. I just don't have the time or the interest or the motivation to invest in it. I do find it really stupid of myself that I didn't invest that time and attention years ago.

What I do recognize is that when we have meeting for example, and I do it myself too, though I don't do it very often, but certain pieces that I find are really important I will still print them out first. And I see that happening a lot. If I printed it out I have the idea that I read it better, that I understand it better than if I am just looking at a screen. In the past everything was printed, and that is becoming less of course. But I am so used to it that I would really rather have printed paper in my hand than looking up at a screen. In print it feels closer to me, or I don't know what it is. I read it much more consciously that way. If it's digital I am more inclined to just scan and think, "I get the idea." But if I print it out then I really get the feeling that I need to read something. So if you have an important meeting, then you really want to be so well prepared that somehow you still just want to have it physical in your hand. Paper has a smell and you can feel it in your hands. You can turn a page. And I can imagine that you have that association much less than we do.

It is about information accessibility. The downside is that there is such an overflow of information that it makes it hard to find things back. All of the information sinks into a pit and you never get it back out. I still really like hand written to do lists. The more traditional lists and check lists. I need to see it. If it is all in folders in my PC, no matter how well organized I am. It feels gone. I really need folders. Plastic folders. And every morning I can look at it and think, what do I really need to do today? What do I need to remember? Ok, everything is in the computer, but in that way you miss a lot of real knowledge. You notice those types of things when working with younger generations. They say, "we'll look it up." And I feel like, but if you are sitting in a meeting and a question is asked of you, you can't really say, I'm gonna look it up. Then the expectation is still that you have that information top of mind.

Paul

I have never used a computer for preparing my projects, and I could have in the later part of my career, but there is something else, I like to prepare by hand. I would rather do that than access a computer. I chose not to make

that transition because I was able to. They could have, if I had been younger, if I had been twenty years younger I would have had to embrace that technology. No doubt about it. And I would have. If that is the way you have to do it. But probably within 5 minutes somebody would have already lost me. They just assume that I know what all of this is. So I think, it's fine. I tried. I never really have the feeling like I am missing anything. If you work at home or you are an independent contractor then there is nobody that really pushes you or informs you. I don't access it because I can't be bothered.

With internet I used to think, why is it even necessary? You can send what you need through the post, and then you get everything you need to do. You send a letter and it arrives. Now your email inbox just keeps filling up. Ya, you didn't used to have that.

Before you were only actually doing you work, but now it feels like you spend half the day just getting through all of your emails. And that is something that you have to learn. And change your behavior and way of working to address that. Because if you don't do that then you are just running around like a chicken with its head cut off because all of the time slips past you. So you learn to deal with it. But it is a big part of your work. You get all of these emails in, and you do want to keep your inbox empty. A lot of questions come in that way. I feel like, how do you get to your real work?

But I am also not on Facebook, not on LinkedIn, none of that. I find it is less important. Even though sometimes for work it actually would be practical. I can look up information about my clients. But, then I find the disadvantages greater than the advantages. However, I have had a website for a long time. And last year, a year ago, my new website went live. The son of my neighbor helped me with that, but that took quite a while. My old website didn't work anymore. It was made on a system that was never really search engine optimized. But I didn't know how to do that, I didn't know anything about that, and if I had to start from scratch then it would have cost me a lot of money so I just left it. So I was never really searchable online. But I hear from a lot of people that actually you should tweet and you have to put all these things on Facebook; make a Facebook page specifically for the company and that you have to make sure that people like it. And I thought, I can share a bunch of messages like what other people do about how this is interesting and that is interesting. And I do that sometimes if I find it really important. But most of the time, I just leave it. And that does have the consequence that I am not very findable. We have had seminars from the professional organization where they talk about how your target audience is online so you need to be online as well. Otherwise you are going to miss the boat. So ya, that is a very important medium. I do realize that. But with the tweeting and everything I just find it so annoying. I don't even read it myself. All of that complaining.

What I do do is Google things all the time. Internet made my work a lot easier. I experienced the beginning of search engines, and now you just go Google something and it is very normal. The advance in the last ten years is superb. In the beginning it was a bit clunky, but it is more dependable now as long as you know what to search for. For me that is really the source of all of my information. I search for things a lot on the internet for things that are related to my field. Everything that I want to know about client's businesses, different careers, laws, all of that information. I Google like crazy. There is not a single day that I haven't Googled at least a couple of times. So that I really do do a lot. That I do find really convenient. That I can really easily search for things. So when I have the extra background information, and some things change very quickly as well, just recently a lot of things that didn't used to be possible are possible now and the other way around. So I do find it really fun to know all of that information and to use the internet. The more I know, the more I can help people. In the beginning I didn't have internet as that source of information so everything was much more difficult. You really had to look up everything in books and in the library. That is where this whole bookcase full of books came from. You really had to get it all out of these information books. I barely look up anything in real books anymore. Now I think, ya. It is really easy to just do things via internet. So I guess I do. And you see your kids doing it and then you think, "Ya, I can do that too."

I can remember, we always had a phone at home. The first phone we had, it was a dial, and you first had to press a button to make sure the other party was not on the line because there weren't enough lines and you had to share a line. They called it a party line, it was common everywhere. You couldn't dial, you had to go to the operator to dial outside your district. Seeing these transitions to direct dialing, and then the world. It was amazing. It's all telephony, not just mobiles. So mobiles are a wonderful extension of that. But it is a longer progression. I mean our first phone didn't even have a bell in it, the bell was separate and wired somewhere in the hall.

But I do remember, **when the mobile phones first came, I remember saying, "I don't need a mobile phone."** On the one hand I think that it is useful. But I also think that there is a downside. Then people are always on their phone. I think that is really irritating. It's just kind of a pity. You used to really talk to people. Sometimes you have two people sitting next to each other and they are both staring at their phone. If I were to go out to dinner with someone I would never look at my phone. I leave it turned on in case something happens so that I am reachable but I would never look at my phone. It's just not very social and it's not necessary. I think it was also just kind of my aversion to the phone in general, being reachable. So I wanted to keep it away from me.

Most of the same time I don't find it inconvenient not having my phone on me. **In the weekends my phone is laying on my desk.** So I normally don't have it with me. And I can definitely forget it sometimes when I leave the house in the morning. **No. If I were to get called right now, I would definitely find that a disturbance. People just expect an immediate answer.** But *I don't really like calling in general. Yes, I have a mobile phone and I can email people, but for me the true essence of the work is in the face-to-face contact. I get so much more information when I am sitting across from someone then if I do it over the phone. If there is a conflict then I need to know what is actually happening. You can say over the phone, "It's fine," but if you are sitting here with me then I get a lot more information both verbally and non-verbally than what you get over the phone or via the computer. I find it to be great support system, but not a tool through which my work actually gets better. But it does get easier. And that is also the nature of my type of work of course. If you ask me, "What do you do every day?" For me good conversation is really more important than sitting behind a computer.*

I see the advantages of the **new technological possibilities.** Like how **it is much easier to share things with each other.** If someone is sitting in a different location you share your screen, audio, you talk to each other, you show each other things. That didn't used to be possible. So those are huge advantages. But still I find, **face-to-face together in a room with somebody with a whiteboard the best way of working.** You see the way that someone reacts and together you can develop something. And I just think that that is really powerful. That is powerful. Absolutely. Now there are just more options. So not only that all of these things come at you where you think, "oh can I handle this?" But also new opportunities. I see that side as well. I often have to consciously tell myself, "just try it, see what happens, be flexible." But sometimes it does get pretty tiring. And it is difficult. It takes a lot of effort.

I am not afraid of technology. I do have problems with things sometimes. But **Outlook and that kind of stuff, I have never found that to be a problem. It was only super useful. You can easily look in someone else's agenda. It is very easy to just pick a time, invite people. All that kind of stuff. I can never remember finding that annoying. I always thought that it was quite fun. And those changes I have always appreciated it when new things came.** *The essence of my work has not changed by way of the technology. A bunch of floppy disks is the same as a database. I have always just experiences them as different support systems. One might be faster or easier to access or creates prettier outputs. But the essence really hasn't changed. I really don't like administrative processes, so it was the work that I didn't like that got taken away. Before it would be like watching paint dry. You would sit back and think, it'll be there in a minute. But now you expect it to be instantaneous. Rather than it just being a wonder and a miracle, we are becoming increasingly discerning to think, "it shouldn't do that." We are used to thinking that it should be immediate. It's expected. It's outstanding how good it can be and therefore an, irrational, annoyance when it doesn't perform as you know it can.*

Mary

I experienced the entire digitization. And the beginning from the perspective of a support staff function. For a long time I was a traditional secretary that learned to type completely manually with ten fingers on a typewriter. And then later with an electronic typewriter. And much later the computer came. At the beginning of my function, and that was the really big change, you worked as a secretary one-on-one or for a group of people. And you did everything for them. Because at that time those employees did not do anything digitally. Every letter was typed with carbon paper behind it and every appointment was made by the secretaries. You would sit next to your boss's desk and go through the mail with them. That is the perspective that you are coming from. With bosses that are completely not digital because they were not the ones who would be sitting behind the typewriter.

Must have been 1984 when we got a fax machine and that was so miraculous. From one side of the world to the other, in a moment you can signal it or something, so it was also in the computer room and that was very secret and people talked about how soon it would be in every office. And everyone was like, "Wow, that can't be possible." The fax machine was a huge improvement for my work. Faxing was much better than waiting for two weeks for things that would never arrive or couriers who would have to hand deliver things. The fax did really improve things. And I thought it was fun, how fast everything went. I had a computer myself at one point, one of those IBM computers, it actually wasn't even really a computer, more just a typewriter with memory. So I could type a letter and then it would be printed out all at once. I don't know if you are familiar with these kinds of things? But it would type out the letter. So I guess to some extent that was already the first small computer.

We are of the generation when everything started to digitize and I experienced it very much myself, with all of the new systems. Look at our CRM system for example, all of a sudden the information from 12,000 different Excel files and Word Perfect back then as well still. All of it needed to get put into a CRM system. Where? Nobody knew. What? Who? No idea. So there is a set of super programmers sitting across the table from you that knows all of that. That then later says, "but you didn't ask this or that." Ya, but if I don't know how it works then I don't know what to ask. You literally are speaking a different language with the feeling like you never actually got an answer to your questions. And then that anxiety, the anxiety of, I don't understand you and you don't understand me. The irritation between people, that then don't understand each other. The one person says, "but it is obvious isn't it?" How many times I haven't yelled, "Ya, but I can't ask questions if I don't know that that should be a question." That is definitely the anxiety to really give yourself over to the new system. So I think, what I have, maybe it is not the most efficient but it works. I think it is fine to participate in the new system, and to invest in something new, but maybe I did stay stuck in the older systems for a while.

We started sending emails instead of paper notes to each other for example. But that was also the time that people started sending a bunch of nonsense to each other through email. If you would send letters, you would really think about it. What do I need to write? *When you sent physical letters you had to wait up to four days for a response. I sent it, if I'm lucky you get it the next day, but who knows if the person can read it right away, and then they have to send it back, and in the beginning it really took a couple days. So just a silly note or a message you didn't do that by letter. You would maybe call someone or ask them during lunch about this or that. But these days people email about every stupid little thing. It drives you crazy. You get thousands of emails a day in a company and it makes no sense. You did notice pretty quick there was quite an over kill, people would think, "I'll just send this information to 20 people and then everyone knows it." What they now often call communication is informing someone via email. That is not communication. That is just one sided telling people things.*

I do check before I go to bed and stuff like that, but I am not someone who is always checking. I just check when it works for me. But there definitely are moments when you get an annoying email, when things go wrong, and then at 11, 11:30 you go check your email and then you can't really sleep well. That is annoying. I almost can't imagine anymore what it was like to really wait for the mail. Ya, and there is a whole generation that doesn't know any better. They don't know any better than always being reachable. **The more you make things easier,**

then the more people start to use it. Sometimes over use it. And I definitely had that with email. That there were just too many emails. Before you didn't get interrupted as often. Before, I would get the mail every morning, and sometimes again in the afternoon and you got an envelope with all of the things for you, and you could decide for yourself when you were going to open the envelope and look at it. So you could just keep working. If you were busy then you just keep working. But these days people get disturbed all the time through a phone call or email and then the other person expects that you respond right away to sometimes the stupidest questions. And I think that it costs us a lot of time. But what is available gets used.

Internet professionally meant the beginning of working from home. That is convenient on occasion, but I find working from home to be an awful form of cutbacks. It's bad for the work dynamic and for team cohesion. Bad for company pride. I did it myself a couple years, and what you then really start to miss is the energy. You miss being able to tap into things that are happening and what you hear when you are standing next to the coffee machine. All of that has disappeared. Learning from each other, hearing things, asking someone if they can you quickly check this letter for me. You don't do that through email because then all of a sudden it is very official. That is really a loss.

But the biggest problem is the reachability. The idea, the feeling that you have to be reachable. And it also, the other way around, allows you to feel irritated if people don't respond to you immediately. So it is very double. Earlier a letter had to be typed and approved and then signed, and it took 4 to 5 days before it was on somebody else's desk. And everything that you did, you kept that in consideration. Now emails, 5 minutes before end of the day emails still get sent out. So it always feels very urgent and forced. That I find really a big problem.

I think that remote working will dissipate in time. I think that it is just a wave. You see it that bosses no longer expect that you are working 24 hours a day and that you are allowed to turn off your phone. Work/life balance was quite out of balance in the beginning. Because it was very chic and a status symbol to be able to be reachable and to be able to work and the bosses stimulated that, that you were always reachable. And when the laptops first came, it also became more normal that outside of work hours you would finish your tasks. And in the beginning that was fun, but eventually it became annoying because it became too much. I feel like my generation was in a hose and that the next generation will have found more balance between life and personal.

I ask myself if it is really all worth it. When you talk about themes like burnout. It used to be the case that people were stressed and over worked, but the term burn out you didn't have. And of course I am also of the generation that you have seen people really get pushed out. I'm also a little bit sad about all of the things that you lose along the way. All of the jobs that get lost. And for those people we no longer get a replacement. So they are sitting there unemployed and then you think, "have I worked all these years for nothing?" We assume that those older people just understand everything when really they are much more careful. When I see how my grandson for example, he is two and with his fingers he uses the iPad. We still don't have that. We are still scared that we are going to throw something away or do something that can't be undone. And your generation doesn't have that. You try things and you think, we will see. But if that anxiety is there then it is really difficult work. For me for example, with Excel, I used to have to calculate certain things and now you just put it in excel and know that it will be correct. You can calculate much more. So that of course has lots of advantages. I can use it, but I can't actually make them and I have very consciously decided not to bother learning. I am not really a numbers person to start with. I can read it, so I can understand the balance and I can do the rest. And that, I am not going to learn anymore, and I'm not bothering anyone. Sometimes maybe it is inconvenient for myself, but then I find a different document and enter the numbers into the old spaces and you get very creative in your problem solving in that way.

I have not delved any deeper into Excel than to know that there are different sheets and that I can use the sum formula. That is what I use it for mostly. But our finance guy for example is very precise in his monitoring systems, and he has a very specifically formatted need for information. But there is no room for people who don't fit into his system. So what he requires from me is that I conform to his system. What happens is that I get pushed into his

system of expectations. What happens is that I run into my limitation when it comes to Excel, but also discover through that that I need to fit into his system. That I need to be compatible to him and not the other way around. And I find that really aggravating. I really get this idea like, "Um, who am I in this situation?" You would think that he too is working for the greater good of the organization, so when I ask he seems willing to help, but to do it in his way. When I come to him with a question or ask for help he says, "I'll do that for you real quick." Because he can do that "real quick." You can imagine. But ya, I don't do that real quick. For me that is a whole learning process. Ya, that is really annoying. And these are symptoms of something deeper in the communication. That you aren't seen as an equal.

And we are from the time that after we finished our formal education it was really normal to think, "Now you know everything and you don't have to go to school anymore." Lifelong learning wasn't really a thing. Ya, you learned things in practice, but not that you went back to follow a training to learn something new. People didn't do that. In my experience, we didn't need to do that anymore. It did change over time, and it's fine of course. But that did lead to the idea that you are more resistant to all the extra things that you have to learn. And if you are already under a lot of pressure at work, then you are just not waiting for that extra thing to be dropped on your plate. I really just thought, "Again, we have to learn something new. I just can't right now." Ya, in that kind of period. I just felt like, leave it be. And if you don't feel comfortable with something then you don't see the advantages of it. That I would have to enter the same numbers in a different way in a new program. I didn't even understand what I was trying to understand. I felt like, I know what I need and I'll leave the rest. Eventually I did have to do it though. But at the beginning there are a lot of hurdles. So if you are getting older and the number of changes is increasing, because it really is happening faster than before, then it just hits you twice as hard. More changes in more different ways and you are getting older so that combination, it just, it is a lot. And sometimes I just think "phew". I am happy once the week is past. The question is how long can you keep up and go with the system? Sometimes I think, "can I really still keep up with this?" So it is important to keep that balance. In the search to really get comfortable in all of those new technologies and tools, the new way of working. I knew that technology was going to change the work, but not immediately that it was going to improve things. It takes a while before you really see the advantages.

You currently have the generation that did experience the way it used to be, that saw the advantages but also disadvantages, and now participates in these new changes. And that is what I mean when I say we used to know a different way. And I don't mean to imply that everything was better because we had to do all kinds of unnecessary work and lists and things. Of course I agree with that. Of course there are also advantages. But there are also disadvantages of all of the changes that there are now. I hear it from lots of other people in my generation when we are talking about it. So not everything is good. It has given us more freedom, but for my job you also have to look more at the human side then only the really practical side. I think that it also has to do with the fact that if you all are only focused on the computer then it is only digital. It doesn't really have a face. I think that once you lose that, our generation, then it definitely will become a totally different story. Then new is just new. But in our generation it also has to do with respect for people.

Psst! You still here? Good.

I have one last thing for you.

Truth or dare?

Yes, I'm serious. Now,
Truth or dare?

Truth

1. How did you feel the last time someone asked you (or you asked) for technical help?
2. How did age/generation affect the integration?
3. How do you wish the interaction had gone differently?

Dare

1. Ask a friend or family member about the first time they used a computer.
2. Tell them how it makes you feel to hear their story.

Pay attention. This one is important.

3. Use this information. Take it out into the world with you. Don't forget.