

Age Relations in Small and Medium-Sized Information Technology Firms

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## **ABSTRACT**

**SARA BETH HAVILAND:**  
Age Relations in Small and Medium Sized Information Technology Firms  
(Under the direction of Victor W. Marshall)

I propose an integrated approach to understanding age relations in the new economy, focusing on how age influences new economy workers, and in particular on the effects of social and political structures.

I answer the broad question, “Does age matter in the new economy?” by investigating an industry that is particularly representative – information technology (IT) – using small firm case study data. Drawing on several theoretical traditions, I situate data in broad societal structures, industries, and firms. My focus is less on traditional concerns about ageist attitudes or overt discrimination and more on gaining an understanding of age as an organizing mechanism at work.

Risk is a defining feature of the new economy, and to establish the context of the study I compare the experience of risk by US workers to that of workers in other WANE countries. I describe how states protect workers from risk, finding a qualitative difference in how individuals experience worry across welfare regimes. In less generous liberal welfare regimes, individuals feel more vulnerable and firms must take more expensive measures to mitigate employee worry than in more generous liberal regimes.

I then focus on age relations in IT, finding that all age groups experience some age designation, both negative and positive. Labor process issues underlie many age issues: the perception of some is that old are managers, or are paid more for doing less work, while the young are fast and cheap workhorses. This suggests that some workplace ageism may be rooted in tensions related to the

labor process, and can be described in terms of the political economy perspective and labor process theory. However I also find that job sorting tempers these tensions, providing age accommodation.

I end with a discussion of the situation of workers today, who face divisive labor processes, and varying protections from risk at firm and state levels. I find that age does matter at work in this new economy industry; it shapes the experience of workers both positively and negatively, and is intertwined with labor process structures. Age accommodations mitigate the overt display of age conflict in the IT industry.

To Christopher, Pierce, Delia Rose, and Ada Grace.

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I thank my committee members, Howard Aldrich, Arne Kalleberg, Julie McMullin, and Catherine Zimmer, each of whose professional work served as an inspiration for me in the dissertation process and in my career. Having such leaders in the field guiding my work was a special privilege, and my dissertation was greatly improved by their feedback. I also thank the faculty of the UNC Department of Sociology, who played such a major role in helping me discover and hone my own academic perspective over the last nine years.

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develop as a researcher and project manager, took me to beautiful locales, and supplied me with two of the most necessary things for graduate work: data and employment. I am so proud of the work that the team has done, and hope to find myself on future projects with members of this dynamic and collegial group. I am particularly grateful to the 586 workers who participated in this study, often with little more than a handshake and a free pen, and the 47 firms internationally that sacrificed work hours and generously granted access to all levels of their organizations.

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hear: “I’ll pick up dinner.” It’s been quite a journey but I’ve had an extraordinary co-pilot; I am proud to share this accomplishment with you.

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## **LIST OF ABBREVIATIONS**

ILM	Internal labor markets
LPT	Labor process theory
WANE	Workforce Aging in the New Economy Project

## **CHAPTER 1.**

### **AN EXAMINATION OF WORKERS IN THE NEW ECONOMY AND INFORMATION TECHNOLOGY INDUSTRY**

#### **CHAPTER OBJECTIVES**

In this thesis I propose an integrated approach to understanding age relations in the new economy. I will answer the broad question, “Does age matter in the new economy?” by investigating discussions of age in one industry that is particularly representative of the new economy, information technology. I will contextualize the analysis, drawing on insights from several theoretical traditions, situating data in broad societal structures, industries, and firms. I shift focus away from traditional concerns about ageist attitudes or searches for overt discrimination and toward an understanding of age as a sorting mechanism in the modern work environment. This chapter introduces the project, rationale, and theoretical traditions from which I will draw.

#### **INTRODUCTION**

The experience of age at work has new urgency in the modern economy, where an aging labor force is operating in an increasingly risky environment.

The world population is aging at an unprecedented rate. At the turn of the millennium, the median age globally was 26 years; by 2050, it is expected to reach 36 years (United Nations 2001). Much of this increase is driven by more developed nations, which are experiencing more rapid population aging than developing nations, where improvements to infant and child mortality

can actually lead to population younging as the proportion of young people grows (Uhlenberg 1992). In developed nations such as the US, the proportion of the population over age 60 was approximately one fifth in 2000; by 2050, it is expected to be closer to one-third (United Nations 2001).

Keeping apace of the world demographic shift, the US is experiencing profound population aging that will impact the workforce for several decades. While declining birthrates have accounted for much population aging in the US and other countries, additional demographic change can be attributed to increases in life expectancies and the aging of the baby boom cohort (those born between 1946 and 1964). As demonstrated in Figure 1, the oldest baby boomers passed age 55 in 2001, entering the “older worker” phase of their careers.<sup>1</sup> In 2012 these first US boomers will reach full retirement age for social security pension.<sup>2</sup> While this year marks the beginning of a major work exodus for older Americans, it also marks the continuation of a period of rapid increase in older workers as the boomer population moves through the second and third acts of their careers. The youngest baby boomers will reach full retirement age for social security pension in 2031.

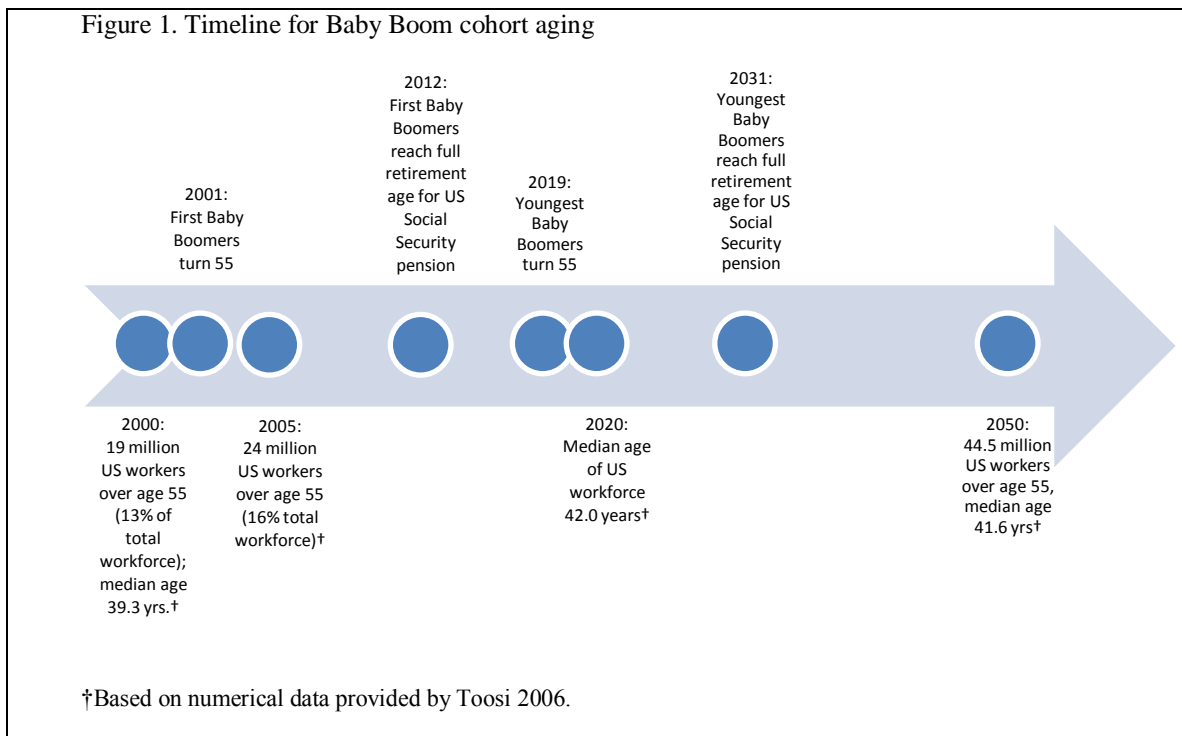
Aging boomers are dramatically changing the age landscape of the civilian labor force as they move into the twilight of their careers. In 2000, just prior to the first boomers turning 55, the U.S. civilian labor force aged 55 and over comprised roughly 13% of the total workforce. By

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<sup>1</sup> Economist Mitra Toossi from the Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projects, classifies labor force participants into three age categories: youths 16-24 years, prime-aged workers 25-54 years, and workers 55 years and older (2006:36). While these categories do not take into account all aspects of the social construction of age designations, they do provide a helpful starting point for describing the demographic composition of, and changes to, the U.S. workforce.

<sup>2</sup> Some boomers began retirement and the collection of social security benefits earlier, as the first boomers reached the benefits-eligible age of 62 in 2008. Retirement at that age entitles citizens to collect a reduced pension. The boomers will have a higher normal retirement age for full social security benefits eligibility than cohorts past, with the oldest boomers eligible for benefits at age 66 and the youngest boomers eligible at age 67 (US Social Security Administration 2009).

2050, workers aged 55 and over will be roughly 23% of the workforce (Toossi 2006: 20). This increased proportion of older workers is pulling the median age of the labor force upward. In 2000, the median was 39.3 years; at its projected peak in 2020, it is expected to rise to 42.0 years (Toossi 2006: 37)<sup>3</sup>. In essence, we are in the midst of a process that will last over three decades, where the bulk of one of the largest population bubbles in U.S. history will enter and exit the final phases of their careers (see Figure 1).



Older workers are in many ways susceptible to risk, with greater likelihood of health decline than younger workers, and fewer years to prepare for the possibility of retirement. Yet

<sup>3</sup> It is important to note that these dramatic shifts speak to recent history. The workforce actually became younger when the boomers first entered it; in 1962 the youngest boomers were age 16, and the median workforce age was 40.2 years. This was the highest median age before the boomers entered the workforce in earnest (Toossi 2006:37). Throughout the boomers' lives, whatever age categories they were passing through have experienced great growth. Yet while in the grand scheme of things this is recent history, 1962 was nearly five decades ago. The median age of the civilian labor force was higher then, but very few of today's workers were part of that culture.

today's workers find themselves in an increasingly risky environment; as we near the second decade of the new millennium, white collar workers in the western world face greater threats to personal stability than in previous decades. The turn of the millennium arrived accompanied by a 'new economy', characterized by high-tech industries operating in a global environment with a rapid pace of innovation. Marked by increasing uncertainty for workers due to decreasing commitments between individuals and employers, the new economy is also accompanied by greater vulnerabilities for workers in an era of increasing healthcare costs, greater longevity leading to greater retirement expense, and the weakening position of labor in a globalized economy. In recent years, as employers have lessened their commitments to career-length employment and broad health and retirement plans for their workers, these vulnerabilities have seeped into white collar jobs and are part of the modus operandi of many new economy firms. As a whole, this situation represents a shift in risk from the employer to the employee.

To understand where the risk is shifting, we can look to firms of the mid-20<sup>th</sup> century, often considered a baseline for stable, high-commitment work in the world of white collar jobs. Today's individual-centric risk burden is part of a general departure of the modern workplace from the workplace of the Fifties, or any decade since, in many ways. In the past, large firms with significant capital, such as IBM, were the innovators; today, new developments are as likely to emerge from smaller, younger firms exemplified by the early days of Apple, Microsoft, or Google. Smaller, younger firms typically offer employees little with regard to stability; rather, employees trade stability for the potential of a greater payoff down the road, of greater autonomy, or of an improved working lifestyle.

These smaller firms offer little in terms of firm internal labor markets, for there are often no open higher-level positions to which high-performers can be promoted. However, even in larger firms, internal labor markets have been largely displaced by a drive to maintain functional and numerical flexibility, decreasing the firms' obligations to develop worker talents or reward

workers with a lifetime of successive positions moving up the company ladder.<sup>4</sup> White collar workers once identified their careers with their employers, and mutual loyalty was a central characteristic of the white collar labor market; today's workers rarely anticipate finishing their careers with a single firm—in part due to changes in company commitments to individuals. Where managers or human resource departments in the past might offer strong guidance for employee career development, individuals increasingly navigate and attempt to create meaningful individual career trajectories through positions with multiple companies, as ladders become less standard and less apparent.

In this chapter I will explore these fundamental ways in which today's firms differ from firms of the past, with a focus on the effect on workers and the employment contract, using one particular industry that is an exemplar of the new economy, information technology (IT). The IT sector is a relatively new industry, and characterized by continuous cutting-edge technological development. Rooted in the mid-20<sup>th</sup> century with larger, more traditional internal labor market firms such as IBM, today's IT industry is often the domain of smaller, leaner, younger companies with employment arrangements that require great flexibility on the part of both the employer and the employee.

Given this emerging model of employment, individuals now assume a great deal of risk that was once in the sphere of the corporation. Therefore, I begin with a discussion of the implications of our current societal risk structure for the burden shouldered by individuals, highlighting where we might expect to see some differences internationally. Additionally, I will provide an overview of the study that is the central data source for this dissertation, the Workforce Aging in the New Economy Study (WANE). The WANE study was an international collaboration among researchers in Australia, the U.K., the U.S., and Canada, where the study was based. Funded by the Social Sciences and Humanities Research Council, the WANE study

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<sup>4</sup> The possibility for a single-employer career is not entirely gone in older and more-established firms; see Ranson 2010.

set out to understand three major trends in developed countries: workforce aging, changes to the nature of work in the new economy, and major growth in the IT sector. The WANE study used a mixed methods, case study approach that has yielded rich data about the nature of work in the IT sector of the new economy. I will also raise several research questions surrounding the changing nature of employment in the new economy, which will be the basis for the chapters of the dissertation, and identify four major theoretical approaches that will guide my research: the life course, social psychology, political economy, and labor process theory perspectives. Finally, I outline the remaining chapters of the dissertation, which will explore age relations in the modern workforce, contextualized in welfare states, the IT industry, and small and medium IT firms.

For all analyses, the primary country of interest is the United States; however, I will be drawing on data from other WANE countries (including Canada, Australia, and England<sup>5</sup>) where appropriate to illuminate some of the structural factors that act on workers and firms. These forays into international data also offer a glimpse of alternative systems and remind us, as political economists might, that the societal structures we take for granted are social constructions and not necessarily as static as current policy discourse might suggest. Alternatives abound and understanding these alternatives helps to form stronger analysis regarding potential changes for the U.S. systems in areas such as job training, welfare, healthcare, and retirement.

Finally, it is important to note that the data I will use in the analytical chapters of this dissertation are limited to young small and medium firms in one particular industry, IT, at one particular time (2004-2006), the years following the IT bust. Age relations do not occur in a vacuum; this introductory chapter is an effort to contextualize the study, demonstrating major historical factors that have influenced this climate, including shifting risk allocation in U.S. society, the decline of firm internal labor markets and rise of flexible working arrangements, and

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<sup>5</sup> The WANE study also included data from Germany and the Netherlands as part of the European Community group; however, methodology was most consistent across Australia, Canada, England, and the U.S. and therefore these are the countries I have focused on.

the evolution of the IT industry from its origins in big-company industry dominance to a more open, flexible industry with major contributions from small and medium enterprises. I offer the big picture to frame the more focused data with which I will be working.

## **RISK ALLOCATION AND THE MODERN WORKER**

An increasing risk burden for individuals is a defining feature of the modern economy (Beck 1999). It is therefore impossible to fully understand the situation of workers in the US market without understanding the status of risk in society. In simple terms, ‘risk’ refers to the chance that *known* events could happen, either good or bad. This contrasts with ‘uncertainty,’ in which *unknown* events could happen, either good or bad (Lupton 1999). In historical use, neither risk nor uncertainty is imbued with a negative value; they are simply statements about the knowability of potential outcomes. However, while this historical use of risk may have been value-neutral, risk is discussed in recent discourse with a much more negative connotation (Beck 1999; Amoores 2004; Hacker 2006). Still related to potential outcomes, risk and uncertainty have become more related to the chance that something will go wrong. It is in this vein that I discuss risk and uncertainty in today’s society.

Risk for individuals in areas such as employment, health, and retirement is typically addressed through one (or a combination) of three major approaches: it can be shouldered by individuals, by employers, or by the state. In the United States, the state assumes some risk, mainly through safety net and limited entitlement programs; however, a great deal of risk is shouldered privately, most often through employers. This makes the U.S. one of the least generous states in the developed world for public spending (see discussion in Chapter 3), yet when you account for private benefits, the proportion of U.S. GDP devoted to welfare<sup>6</sup> provision

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<sup>6</sup> While ‘welfare’ is typically described in terms of the application of state power to protect individuals from hazards in industrialized nations, and to provide for a minimum standard of living for citizens, Hacker notes that many of these private benefits actually serve the needs of, and are encouraged by, public policy.



is actually comparable to European counterparts (Hacker 2002). In health care, accounting for private spending actually puts U.S. spending above that of other nations (OECD 2009).

Economist Jacob Hacker has termed the U.S. system a “divided welfare state,” as both public and private systems are heavily involved in addressing welfare needs (Hacker 2002). This system works best for workers who have stable employment with employers who provide healthcare and retirement benefits. Indeed, much of our social security system and labor laws were built with the idea of stable employment in firms with internal labor markets (Kalleberg 2000).

However, employers are quickly losing interest in shouldering the bulk of societal risk. Analyzing consulting materials for business development, Amoore noted the increasing characterization of risk as something to be embraced and used by the individual:

To use a metaphor, in contrast to the taming of a wild horse (risk management), these representations claim that individuals should learn to ride the wild horse and ride off into the global sunset (embracing uncertainty). In this way, what are perceived to be the best features of the wild horse – spirit, energy, innovation, creativity, and adrenaline – are harnessed for profit and growth. As in discussions of the contemporary penchant for extreme sports...it is not the environment that is regulated, disciplined and controlled, but the individual dealing with the hazardous environment (Amoore 2004).

For some workers, this individual assumption of risk works; some professionals consciously choose to assume a great deal of risk and become “itinerant experts”, moving to contract work and accepting risk as a tradeoff for greater freedoms and autonomy (Barley and Kunda 2004). Yet this spirit of adventure does not come without a price, as the individual dealing with the hazardous environment will sometimes be harmed by it. In an era of globalized competition not only for goods but for services, firms themselves can assume greater risk by shifting some risk previously shouldered by organizations to individuals. As Amoore notes, “If the embracing of risk is becoming a central means of governing in the global economy, it is made possible through the displacing of risk” (2004:192). This is accomplished largely through flexible employment arrangements and the removal of guaranteed employment, as well as the decline of defined

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Therefore he employs the term ‘welfare’ to describe private benefits as well as public benefits, as I have here (for his discussion of the terminology see Hacker 2002: 10-12).

benefits; individuals are encouraged to embrace this increasing risk themselves and learn how to create opportunities within it. Rather than viewing increased risk burden as a hardship, the worker is encouraged to see it as a chance at great reward. In this risk environment, however, the firm does not have a greatly increased exposure to risk; its workers (and their families) do.

Rather than the stable employment that they enjoyed in the three decades after World War II, workers today face what Kalleberg has described as precarious working arrangements, characterized by “employment that is uncertain, unpredictable, and risky from the point of view of the employee,” a departure from the three decades of stability enjoyed by workers in immediately following World War II (Kalleberg 2009:2). Permanent attachments to employers cannot be assumed, long-term unemployment is a growing reality, perceived job insecurity is increasing, nonstandard work arrangements and contingent work arrangements are on the rise, and risk is increasingly shifting from employers to employees through a shift away from defined benefits pension plans towards defined contribution pension and health plans. As noted by McMullin and Marshall (2010), the risks once borne by owners are increasingly borne by workers, and “it seems then that a new category of employees has emerged, who like the entrepreneurs of post-Fordist economic orders, must assume responsibility for risk without the possibility of deriving profit from risk” (2010: 23).

The increased risk burden borne by individual workers is even more worrisome in the new economy, where the nature of risk itself is changing to include more uncertainty. As noted by Beck:

the collective patterns of life, progress and controllability, full employment and exploitation of nature that were typical of the first modernity have now been undermined by five interlinked processes: globalization, individualization, gender revolution, underemployment, and global risks (as ecological crisis and the crash of global financial markets). The real theoretical and political challenge of the second modernity is the fact that society must respond to all of these challenges simultaneously. (Beck 1999:2; discussed in McMullin and Dryburgh, forthcoming)

In their discussion of Beck's risk concept, McMullin and Dryburgh (forthcoming) note, "Unlike the relatively predictable risks in old economies, the risks in new economies are more widespread and unpredictable." Returning to Lupton's (1999) contrast between risk and uncertainty, discussed above, the new economy introduces a greater level of uncertainty (the chance that unknown events might occur) in addition to risk (the chance that known events might occur), at the same time that societies and employers are shifting a great deal of risk burden to individuals.

A major contributing factor to this risk shift from employers to employees is the decline in firm internal labor markets and the rise in firm flexibility, to which I now turn.

### ***Competition and Firm Internal Labor Markets***

The decline of firm internal labor markets (ILMs) is behind much of the change in the modern workforce, a symptom and cause of the greater shift of risk to employees. ILMs were characteristic of middle and upper class work in the mid to late 1900s, but fell out of vogue as companies attempted to adopt more flexible business models to respond to competition and market pressures (for a description of ILMs and the original shift away from them, see Osterman 1999). ILMs are also more difficult to implement in the smaller, younger firms that are quite prevalent in the market (Granovetter 1984) and typify many IT businesses.

### **The Rise and Fall of ILMs**

ILMs are a hallmark of organizations seeking to induce high commitment from employees by demonstrating high commitment on the part of employers, typically through career-long employment and organizational development of employee skills (Cappelli et al. 1997). In ILM firms, there were limited points of entry into a firm, and employees came up from the bottom ranks and worked their way through a proliferation of job titles meant to suggest upward career movement (Baron and Bielby 1986). The heyday of ILMs in the U.S. began in the mid-20<sup>th</sup> century (Althauser and Kalleberg 1981; Doeringer 1971). This was a time when union organizing

and collective bargaining were at their height, and the AFL and CIO were at their peak (Guillen 1994).

Organizations using ILMs invested a great deal in workers and expected that workers in turn invest a great deal in the company; this mutually high level of commitment, however, leaves an organization with much less flexibility to handle economic downturns and expansions as each employee represents a great level of commitment and investment. Layoffs, when they did occur, were catastrophic for employees<sup>7</sup>, many of whom depended fully on the company for their livelihood and would have struggled to gain access to similar jobs in other firms as external candidates with particularistic organizational knowledge. Additionally, with limited portals of entry into a company and homegrown talent filling the top levels, it was difficult to attract talented individuals in the field that were not internal to an organization (or, the potential organizational benefits of bringing in top external talent were unrealized).

It was this general inflexibility, coupled with historical context, which brought the downfall of widespread ILM use in the late 20<sup>th</sup> century. As labor laws became more protective of permanent employees in organizations, they also created a deterrent for employers; it became easier and cheaper to maintain a core of permanent employees that was supplemented by a periphery of nonstandard workers (Cappelli et al. 1997; Hakim 1990; Kalleberg 2003; Pollert 1988). Union influence dropped precipitously (Clawson and Clawson 1999), and worker power in the employment market was eroding. Organizations began to compete on a global stage, the pace of technology increased, and firms began to seek arrangements that could respond to this

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<sup>7</sup> This is part of the rationale behind programs such as return to work provisions in the automobile industry, where employees let go in bad times are first to be rehired when things improve. Programs such as this insulate the worker from the higher risks layoffs become in industries with strong firm internal labor markets, and are an additional way that firms are committed to individuals even in situations where it might be difficult to maintain high levels of commitment.

environment (Kalleberg 2003; Piore and Sabel 1984), providing both functional and numerical flexibility (Atkinson 1985).

### **The Rise of Flexible Firms and its Costs to Workers**

The resulting organizations were lean, mean, productive machines, but not very stable for a large class of workers. While shifts towards functionally flexible arrangements such as high performance work operations (Marsden 1999) may have benefited individuals with scarce, valued skills, those who did not possess these skills often faced stagnant wages, layoffs, and inadequate benefits (Cappelli 1999; Osterman 1999). As noted by Osterman, when these types of organizations set wages, internal organizational equity is ignored (though in ILM organizations it is considered more directly). Rather, wages become more tied to performance, resulting in growing inequality within the organization, even across positions at the same or similar levels.

It is important to note that the shift to more flexible arrangements like high performance work organizations was never fully complete, nor was the presence of ILMs in the mid-20<sup>th</sup> century ever universal. There are disagreements about the extent to which these flexible forms have been adopted, which have been made more difficult to resolve given the scarcity of longitudinal data and industry variations (Kalleberg 2003).<sup>8</sup> And just as there is disagreement about the extent of the shift from ILMs to flexible arrangements, there is disagreement about the extent to which nonstandard work arrangements really represent a change in institutions underlying employment relations (Cappelli 1999; Kalleberg 2003). There have always been nonstandard work arrangements; standard, hierarchical ILMs may have been more of a historical fluke than anything, brought on by a perfect storm of strong worker power and the prevailing management philosophies of the mid-20<sup>th</sup> century. Internal labor markets were the domain of

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<sup>8</sup> However, Kalleberg (2003) also discovered using data from the Second National Organizations Survey that between a third and half of organizations use elements of both numerical and functional flexibility. This is consistent with an earlier finding by Osterman 1994 that 35% of firms with 50 or more employees used two or more flexible firm practices.

white, middle- or upper-class men; women and minorities have always experienced greater insecurity. However, there have been major decreases in job stability among even male full time employees between the early 1980s and 2006 (Munnell and Sass 2008), and there is evidence that a decline in firm internal labor markets and rise in flexible employment is having a substantial impact on the modern worker (Kalleberg 2009).

The move toward more flexible, less committed firms fragments the labor force along the core and periphery lines, creating in- and out-groups in industries (Kalleberg 2003). Atkinson's (1985) core and periphery model for workers makes something of a zero-sum game in the workplace; increasing pay, security, and benefits for one group often come at the expense of the other. Who are the winners with the rise of flexible firms? In general, the organization often wins in terms of productivity and efficiency, reacting more nimbly to the demands of the marketplace and keeping costs to a minimum. Highly skilled, adaptable workers are also able to stay ahead, but lower-skilled workers and those in non-standard work arrangements fall behind. The shifting risk and loss of long-term employment has the potential to undermine not only individual health and economic well-being, but to also affect character development and social ties (Sennett 1998).

Flexible work is only one way that risk is increasingly shifted to the individual; there are also moves away from defined benefit and towards defined contribution pension and health plans (Schulz 2006) that further threaten worker stability. While in the early 1980s, 83% of medium and large firms offered defined- benefit pensions; today less than a third do (Hacker 2006). Today little more than half of workers employed for 20+ hours per week receive health coverage (over 70% did in 1980), many plans of which pass costs onto employees as deductibles, co-pays, and premiums (Hacker 2006). The worker is left to fend for his or herself.

### ***Societal Risk and the Great Risk Shift***

As the employer has shifted risk to the employee, there has also been a further shift of risk onto the individual from the state. In the post-depression era of the mid-20<sup>th</sup> century, there was a greater push towards regulation of businesses and the market to reduce risk for individuals and the business sector. This has been ebbing over the last few decades (Schulz 2006). The decline in regulation and government oversight has been cited frequently as a major contributor to the current U.S. recession (see e.g. Irwin and Paley 2008; Krugman 2008; New York Times Editorial Staff 2009), the greatest economic crisis the U.S. has faced since another laissez-faire era for market regulation, the 1930s (Blinder 2008).

Taken as a whole, the re-allocation of risk from the state and firms to the individual comprises what Hacker has termed “the great risk shift” (2006). As Hacker notes, “over the past generation the economic instability of American families has actually risen much faster than economic inequality – the growing gap between rich and poor that is often taken as a defining feature of the contemporary U.S. economy” (Hacker 2006:2). Hacker, using data from the Panel Study of Income Dynamics, measures income insecurity using income volatility and has demonstrated a great roller coaster ride for American family income since 1990. In the current risk context, it is difficult for families to insulate themselves from the possibilities of financial failure; even families that rise to the top of the economic ladder rest very precariously at the top, only a few lost paychecks away from sliding back toward the middle or even the bottom. And many do: personal bankruptcy has increased from fewer than 290,000 households filing for bankruptcy in 1980 to more than 2 million in 2005, while mortgage foreclosures have increased fivefold since the 1970s (Hacker 2006:13). The great risk shift has great implications for individuals. However, in our current economic recession we see that individual hardship does not occur in a bubble; rather, with the mortgage crisis, credit crisis, and many business failures related to the poor economy, it is clear that the pains born by individuals can affect larger systems

as well. While it is tempting to think that risk has been effectively shifted off the shoulders of our systems to individuals, it is clear that such a shift can never be complete; when enough individuals suffer, everyone else suffers as well.

### ***Information Technology and the Evolution of the American Business Context***

Understanding the precarious position of the modern worker is but one piece of the modern work context. To understand how businesses have come to embrace flexibility and changes in risk, it is important to examine changes in firms and the business context as well. For this purpose I will focus on the information technology industry, an industry born in the second half of the 20<sup>th</sup> century and which has undergone a rapid pace of evolution in the ensuing decades. In many ways, the birth of the modern IT industry came with the birth of the computer in the mid-20<sup>th</sup> century. This era was not only an exciting time of innovation in computing, but also the high watermark for firm internal labor markets for white collar workers, as discussed above. To follow the history of the IT industry is to follow the evolution of the workplace from this baseline of high commitment, formalized organizations employing high commitment employees to more flexible, higher risk, new economy firms. The history of a company such as IBM, long considered an industry-leader in information technology and third on OECD's 2008 list of Top 50 telecommunications firms internationally (OECD 2008), demonstrates the baseline organization against which the 'new economy' is measured: the few, large, formal companies with a great deal of capital, formalized human resource practices, and clear internal labor markets that once dominated the landscape are now competing with newer, smaller, younger, more flexible firms that do not require so much capital to remain at the forefront of innovation.

In 1944 IBM created the Mark I, an automatic sequence controlled calculator, which would begin the already-established company's decades-long dominance of the business and personal computing market (IBM Corporate Archives 2001). Big Blue, as IBM would later be nicknamed, represented the vanguard of U.S. computational innovation. Throughout the 1940s



and, in many ways, up to the present day, IBM would be known as a disciplined, austere, and formidable company. As a workplace, IBM exemplified this reputation with their famous tightly-controlled dress code and formalized approach to human resource management. However, as was the case for many other IT companies, the transition from the 20<sup>th</sup> to the 21<sup>st</sup> century brought many challenges for IBM. Over a half century after its innovation heyday, IBM experienced a business downturn near the turn of the millennium (IBM Corporate Archives). Its products, once industry standard, were failing to sell. A major product launched during this period, OS/2, met with a lukewarm reception in the marketplace (Curtis 2008).

Why might Big Blue, once the vanguard of computing innovation, struggle to thrive in computing innovation in the 21<sup>st</sup> century? While the IT bust was likely a contributing factor, the business context has changed completely in the 65 years since the arrival of Mark I. The Mark I had been made to execute complex calculations and was so large, expert-oriented, and resource-intensive it was only used at Harvard University in 1944. Today's computers are ubiquitous: nearly all white collar workers have a personal computer on their desks, and home users of all ages use them to telecommute, pay bills, shop, follow sports, and play games. No longer simply remote tools for experts, computers and their accompanying internet technology are now user-friendly tools for both working and living. This has implications not only for the pool of potential users, exponentially larger than the early days of computing, but also for the potential IT workforce. And as knowledge diffuses and the cost of IT machinery and software decreases, it becomes possible for more and more competition to enter the market from startups and smaller companies. IBM, the old standard bearer, originated from the marriage of several smaller, successful companies with stable histories. Microsoft, a new standard bearer, originated from some friends working in a garage. Barriers to market entry, both for employees and for companies themselves, have greatly diminished.

This shift has created a great deal of competition for IBM from smaller, more nimble enterprises. In essence, IBM is a large company operating in a field where innovation has begun to come from smaller companies, an arrangement that is not uncommon (Barrett and Rainnie 2002). Modern industry leaders Microsoft and Google were both garage-based projects before they became empires; while IBM has nearly a century of organizational inertia behind it (Hannan and Freeman 1984), newer companies such as Microsoft and Google had the freedom to innovate without threatening their underlying cultures and structures. Smaller businesses can experience even greater freedom, and often do not have the pressure of watchful media coverage when their business practices shift. Innovations were common not only in technology among these firms but also in the conduct of business, and younger IT firms of the 1990s became legendary for their lifestyle-oriented cultures. The IT bust of the 2000s greatly curtailed the capital available for startups and put a damper on some of the more casual working practices of boom firms; however, the culture of the 1990s would have lasting impact on creating a generally more casual, start-up oriented industry culture. IBM is still a major player in the market, but it has had to adjust to a new way of doing business in order to stay in the game.

There are many reasons for IT companies to keep playing the game. Even after the bust, IT remains a very lucrative field with great market potential. Computer and internet use is becoming quite extensive; nearly 60% of OECD households had internet access in 2007 (OECD 2008). The U.S. has the largest population of broadband users in OECD countries. Between 1995 and 2006, information and communications technology internationally experienced 76% gross value added or GVA, while the business sector in general only experienced 66% GVA. Services experienced great GVA growth (97%), and had increases in employment greater than that of the general business sector (28% vs. 20%, respectively). Specifically, computer and related services had remarkable growth (176% growth in GVA, 55% employment growth). With the exception of Canada, all WANE countries had greater contributions to GDP growth from information and

communication technology investments than non-ICT investments between 1985 and 2006 (OECD 2008).

A relatively new field, IT is leading the way in the new economy. The study of this field offers great insight into the nature of the employment relationship today and how that relationship may change in the future. The analyses I present tackle one corner of the issues, small and medium enterprises (SMEs) operating in the middle of the first decade of the new millennium. These firms, in many ways, represent the leading edge of the new economy: small, nimble, and flexible, they offer employees new lifestyles compared to old guard firms like IBM. The firms can be high-risk for employees (the continued operation of the business itself is not always guaranteed, nor is the ability to make payroll consistently), but they also have the potential to offer high intrinsic and extrinsic rewards (the grand IPO, the realization of soaring stock options, the ability to say you made a product that changed the industry or even just had a say in how your company was run). Many of the owners and employees of SMEs make a conscious choice to avoid larger, more stable firms like IBM. These large enterprises can serve as a foil for the business practices of SMEs – that is to say, the SME teams sometimes set up their businesses to look very different from large enterprise on purpose. Careers in these firms are not defined by continuous upward mobility within one firm, but rather they are defined by individuals as they navigate multiple succeeding employment relationships (Marshall, Morgan, and Haviland 2010). Some employers contribute to individuals' perceptions of career progress by focusing on employee development, even if the firm itself will not necessarily sustain the employment relationship long enough to realize the benefits as the employee becomes more skilled (Haviland, Morgan, Marshall 2010); a sharp departure from the model of firm internal labor markets.

## **RESEARCH AGENDA AND THEORETICAL TOOLKIT FOR THE STUDY OF AGE IN THE MODERN EMPLOYMENT RELATIONSHIP**

To this point, I have discussed the new economic environment of the modern worker, where the workforce is aging at an unprecedented rate, and risk is increasingly shouldered by individuals rather than the state or corporations. This offers the individual the potential to reap great rewards, but also an increased chance that rewards may not be permanent or that climbs up the career ladder will be slip-free. I have also discussed the history of the IT industry, born in the era of more stable, internal labor market-oriented business but also evolving during the decline of employer commitment and the increase of flexible working arrangements. I focus on one component of the industry that is the next logical step in this change: the increasingly influential small and medium enterprises, where employees are asked to shoulder particularly high risks in return for the chance to reap greater rewards.

The focus of this dissertation is the situation of age relations at work in these small and medium new economy enterprises, asking the broad question: “Does age matter in the new economy?” Taking a multilevel approach, questions about the employment arrangement arise at three major levels: individual, firm, and societal. These general questions can be phrased as such:

- What is the societal context in which these workers engage in paid work?
  - How does the risk experience of US workers compare to that of workers in other nations?
  - How do individuals perceive that risk?
- Can firms moderate the anxieties of their workers that are caused by their nations’ welfare regimes?
  - How might the different contexts of risk affect human resource practices of firms?

- Does age meaningfully affect the experience of workers in new economy firms? Is this effect positive or negative (or both)?
  - Are age relations affected by structures related to political economy and labor process considerations?

Four theoretical tools are particularly well-suited to examine these questions: the life course, social psychology, political economy, and labor process theory perspectives. These approaches are theoretical perspectives rather than theories; therefore, they do not offer specific testable hypotheses per se, but rather illuminate factors that the researcher should examine to better address questions about employment in the 21<sup>st</sup> century, and offer abstract assumptions about the social world (Marshall 1999). These perspectives further inform my analytical dissertation chapters, shaping the logic of the arguments and the focal points for analysis. To begin, I offer a brief overview of each perspective.

### *The Life Course Perspective*

The life course perspective has roots that date back to the foundations of sociology. C. Wright Mills proposed in the 1950s that scholars should study the life course, which he defined as the intersection of history and biography within social structure (Mills 1959). However, the most recognized articulation of the life course perspective in North America comes from Glen Elder, who built on the works of Matilda White Riley (Riley 1979) to outline five major principles of the life course: first, that aging and development are life-long processes; second, that lives are shaped by the historical time and place in which they occur; third, that timing and sequencing of events in a person's life affects the consequences of these events; fourth, that lives are linked and these linkages have major effects on life experiences and outcomes; and fifth, that human agency also influences life events as individuals make choices within these contexts (Elder 1994).

This is the life course perspective that is most familiar to North American scholars, and a very useful articulation of life course scholarship. However, while these principles clearly orient

much of North American life course scholarship, European life course scholars such as Walter Heinz and Martin Kohli (as well as several North American scholars such as Victor Marshall, Julie McMullin, and John Myles) are less focused on individual biographies and more focused on social institutions such as those of the state and industry (Marshall and Mueller 2003; Marshall and Clarke 2007). The European perspective, including the Bremen model (Heinz 1997), is particularly well-suited to discussions of working life, where there is clearly a role for individual biographies, but these biographies interact with state and industrial structures such as education, health, and pension systems. While they do not fully dictate individual actions and choices, social structures do shape the menu of options individuals can choose from and how they behave (McMullin and Marshall 1999). The European model has three notable components: a cohort approach, a constructionist approach to agency, and an institutionalist approach (Marshall and Mueller 2003). The cohort approach leads Europeans to focus more on historical transitions and turning points rather than individual biographical transitions and turning points. The constructionist approach to agency leads the Europeans to focus more on the construction of biography, or the construction of meaning and narrative attached to biography (North American scholars see agency more as the construction of the life course through choices; Europeans are more concerned with the meanings that individuals attach to the life course as it is lived). Finally, the European approach has a very strong institutionalist bent. While North American life course scholars often allude to social structure in very abstract terms, European life course scholars use much more concrete terms as they characterize the concrete institutions themselves, seeing them as a major driving factor in how individual lives are lived (see e.g. Leisering and Leibfried 1999, which describes the life course as structured by the welfare state). While North American work tends to be individual-oriented, the European group takes a more inclusive approach, linking biography and social institutions. However, these approaches can be quite complementary; McMullin and Marshall drew on both the European and North American approaches to examine “how age and the life course structure working in the new economy *and* how institutions such as

labor systems and nation states influence the structure of individuals' lives" (2010: authors' emphasis).

In addition to understanding the context within which individuals make work decisions or experience work opportunities and setbacks, the life course perspective is particularly useful for its focus on time and place, a major factor of interest in the study of IT workers in the new economy. Like many other industries, the IT industry is a product of its time and place, and as a newer industry with a rapid pace of technological advancement, the influence of location in history and in the world is highlighted to an even greater extent. The geographic location of an IT worker may dictate what level of access to technology that worker has or has had throughout his life; the use of computer technology was initially a much more expensive endeavor and even today, its use relies on access to an infrastructure of electrical and communications systems that is not uniformly available worldwide. Timing is also key; the experience of an older IT worker might be influenced by the overlap of his career with the origins and development of the IT industry itself. Younger IT workers have experienced technology differently, growing up from childhood in an era where computers were much more established and central to societal functions (McMullin, Comeau, and Jovic 2007). Also, the experience of boom and bust is something that cannot be ignored in this examination of the IT industry. The WANE study was fielded from 2004 to 2006, at a time following the IT bust of the late 1990s and early 2000s, but also prior to the major economic downturn that accelerated greatly in 2008 and 2009. This study captures a moment in time, during an industrial recovery but prior to more widespread financial crisis. This specific industrial moment has great impact on the formation and structure of firms, the decisions of older workers who may have been affected by the boom and bust, or the experiences of younger workers who began college expecting a certain IT market upon their graduation but emerged from college to find something else. The experience of all IT workers

would vary depending on location, age at the time of interview, family status, and so on. In all examinations of the industry, time and place must be kept in mind.

### **Lessons from the Life Course Perspective**

The life course perspective offers helpful insight into the nature of working lives. Either way, North American or European, the life course perspective compels us to examine lives in context. We see lives as a product of their times, of their locations, of their relationships, of their societies. There is room for personality and choice, but it is constrained by the context of one's life. At work, we do not make choices based solely on rational terms. Rather, we make choices based on who we are: age, race, educational history, life partners, friends, parenting status, geographic location, the historical moment, the welfare state...all of these factors combine to influence what opportunities we will encounter and how we will choose to proceed.

### ***The Social-Psychology Perspective***

A social psychology framework more specifically focuses on the intersections between individuals and organizations. As described by the American Sociological Association's Social Psychology Section, social psychology sees "the individual as both a social product and a social force" (ASA). Social psychology offers an approach to the study of work and organizations that is concerned with the relationships and reciprocal influences between individuals and organizations or other social structures. Much like the European life course approach, the social psychological approach often focuses on the creation of meaning. However, the social psychological perspective extends this creation beyond the individual construction of biography to the creation of organizational meanings and values and how individuals contribute to, learn from, and internalize these meanings and values.

The social psychology perspective is rooted in the works of early sociologists like Mead and Cooley, whose work had a strong bent toward the intersections of individuals and society,



especially how society shaped individual action (see e.g. Cooley 1964, *Human Nature and the Social Order*, which introduced the “looking-glass self,” an interpretation of how individuals internalize the views and beliefs of society and adjust their behaviors accordingly, or Mead’s 1959 *Mind, Self, and Society* which stated that the individual can only be understood as part of a social collective, that the individual does not form personality or make decisions without the influence of that collective). The golden era of social psychology as an interdisciplinary endeavor would emerge during and immediately following World War II, as interest grew both on the part of academics and on the part of government funding agencies for an interdisciplinary approach that drew upon the works of sociologists, psychologists, and other social scientists such as anthropologists, political scientists, and statisticians (Sewell 1989). Today’s social psychology is mostly rooted in two disciplines, sociology and psychology. I will focus on sociological contributions to the perspective as applied to the workforce.

While early social psychological research in the specific field of work and occupations was oriented almost exclusively toward worker control and the increase of production (e.g. Taylorism and the Hawthorne experiments), social psychology shifted in the mid-20<sup>th</sup> century toward understanding how and why people entered into the employment contract, and the creation of organizational meanings and values. Works such as the Bendix (1956) analysis of how managers justified their authority in different social and political contexts and the Selznick (1984) analysis of the role of leaders in creating organizational meaning both examined the managerial role through a social psychological lens. This represented a shift away from specifically studying management with an eye toward improving productivity; the process of managing others is instead the focus. Others began to focus on the other half of the management relationship as well, often describing the ways that workers were alienated or exploited at work (see e.g. Blauner 1964 on the alienation of workers by technology at work, and Burawoy 1979 on how capitalists convinced workers to consent to their own exploitation). This key element of the employment

contract – employee consent – further elucidated how management was able to function, as well as the role of both employers and employees in the agreement. Other works in the social psychological tradition have examined further the ways that employees find satisfaction and meaning at work (Kalleberg 1977; Hodson 2001) and further our understanding of employee motivations and the employment contract.

As highlighted by March's description of organizational learning (March 1991), there is mutual learning between individuals and the organization in the development of knowledge (organizations socialize individuals to the organizational code, and the organizational code adapts to individual beliefs). This is particularly enlightening in the study of small firms, where individuals may have an opportunity for greater impact on the firm structure and culture, and the shared creation of organizational meaning is highlighted. In many small and medium IT organizations, the hierarchy is quite flat and a team approach is used. Additionally, the social psychology perspective is useful to analyses of authority and the employment contract in these small, newer companies. Many of these firms have founding teams that comprise a sizeable portion of the firm staff. Given the lack of more formal, complicated hierarchies, how do employees experience and interact with authority in these organizations? As the risk burden for each employee is higher for small, newer firms than larger, more established ones, which can affect pay and stability for employees, in what other ways do employers elicit consent from their employees? The social psychology perspective can also provide insights into the effects of culture and social structure on cross-national differences in values and behavior (Schooler 1996). The risk society of today, which I will discuss in greater detail in Chapter 3, makes it more important for individuals to assess these risks and chart their own life courses, assessing, negotiating, and ensuring their own indemnity against these risks as necessary (Giddens 1991). The way that individuals consider these risks, and worries and meanings they attach to them, will be discussed in Chapter 3.

### **Lessons from the Social-Psychology Perspective**

As the life course perspective reminds us of the importance of historical and geographical location to the experience of individual lives, the social psychological perspective reminds us that location influences culture, which in turn influences beliefs and practices. As we examine countries internationally, it is important to pay attention to the potential influence of different value systems on individual and organizational behavior.

### ***The Political Economy Perspective and Labor Process Theory***

Two complementary theoretical perspectives can be employed to address the work relationship in the new economy: the political economy perspective and labor process theory. I describe each in turn.

The political economy perspective is of particular importance for comparative international work. Political economy examines the way that larger social structures, particularly economic and state structures, influence social outcomes. The organization of these structures is not seen as inevitable, but rather as a social construct influenced by actors and interest groups. This perspective is well-suited to examination of societal differences, pointing us to examine underlying societal structures that may drive societies to engage in variations on risk-sharing or the employment relationship. Political economists have also taken the point further, not only discussing individuals in their relations to the systems of the state, but examining states in relation to a world system. Much in the way that we can discuss the core and periphery of workers in firms of the modern economy, Wallerstein has posited that the world system itself operates on a core/periphery (and semi-periphery) model: what we would commonly call first world or the developed world countries are core countries, and the developing or third world countries are periphery countries (Wallerstein 2005). There is a tension in this model, for a great deal of wealth is transferred out of the periphery and to the core; there is an international division of labor, and the core states are always the winners in this model.

While both political economy and social psychology perspectives focus on the relationship between people and social structures, the political economy perspective devotes far less attention to the individuals than it does to the structures and often discusses people in terms of groups rather than individuals (far removed from the individual agency described in the life course perspective). Individual action takes a backseat. Immanuel Wallerstein recently described his approach to understanding social phenomenon:

Personally I have some simple rules of thumb in trying to figure out what is going on in any specific situation under scrutiny. First, locate and outline the structural and institutional constraints. Then, assume that all actors are acting to optimize some objective that is, in their view or from their standpoint, desirable and therefore rational. And see how far this takes you. It will never explain everything. Then, and only then, look for the residual explanations. This usually brings you to what is called the subjective or the actor (Wallerstein 2005).

While this level of downplay for individual actors might make some North American life course researchers quite uncomfortable, it can prove quite useful to the understanding of societal- or even world-level structures and the interplay of groups. One major example of this type of analysis can be found in Esping-Andersen's works, particularly his 1990 book, *The Three Worlds of Welfare Capitalism*. Esping-Andersen classifies welfare regimes into three types: liberal, social democratic, and conservative. These regimes are determined by levels of class mobilization, class-political structures, and the history of the creation of welfare policies and institutions in the state. There is a reciprocal relationship between actors in these systems and the systems themselves; the regime types are determined in part by the structure of socioeconomic status and relationships between the classes, and the welfare regime itself impacts labor markets and class mobility (Esping-Andersen 1990).

One area in which political economy theory has been particularly illuminating is in aging theory. The political economy perspective on aging as we know it today emerged in the late 1970s and early 1980s in response to more normative theories such as modernization, age

stratification, and disengagement theories that saw the disadvantaged position of the elderly in society as necessary for societal functioning (Marshall and Bengtson, forthcoming). For example, disengagement theorists suggested that a mutual severing of ties between the individual and society could help society perpetuate its institutions in the face of death, by slowly removing responsibilities and functions from the oldest members of society (see for example Cumming 1961). In 1981, Peter Townsend complained that “rather than ask how and why is society restricting life chances and opportunities at older ages, most scientists have directed their attention to the problems of elucidating adjustment so as to soften the impact of that adjustment but, indirectly, legitimate its operation” (Townsend 1981). Aging researchers who applied the political economy perspective did believe that the elderly experienced different social status, but saw the experience of the elderly as the result of dynamic processes involving relationships between different age groups, the social construction of age, and the role of social structures and forces (including government but also others).

In his influential 1981 piece, “Toward a Political Economy of Old Age,” Alan Walker described a way forward for aging theory:

In contrast to theories of ageing and the causes of dependent status based on the isolation of elderly people from social processes and values, an approach based on political economy locates the elderly firmly within the prevailing social and economic structure. Thus rather than concentrating on biologically based differences in ageing and individual adjustments to the ageing process, it would focus on the social creation of dependent status, the structural relationship between the elderly and younger adults and between different groups of the elderly, and the socially-constructed relationship between age, the division of labour and the labour-market (Walker 1981).

Thus began the work of political economists, adding economic structures to social structures in the study of aging. Early contributors included Carroll Estes, Anne-Marie Guillemarde, Victor Marshall, John Myles, Chris Phillipson, and Alan Walker. Much political economy work had, or has a Marxist bent, describing age groups and their relationships to the means of production, such

as the power lost upon retirement (the influence of economics and power on age relations in the workplace will be further explored in Chapter 3).

Given the emphasis on the intersection of social and economic forces, the political economy perspective is ideal for understanding the experience of groups in the workplace, itself a major site of the intersection between economic and social forces. Moreover, it is particularly suited to international comparative work on the sociology of work and occupations, given the differing nature of societal structures surrounding work.

The political economy perspective allows us to explicitly explore the ways that social structures such as education systems, social welfare systems, corporate welfare systems, and public policies impact the experience of workers in different nations. Cross-national work allows us to best explore how these societal-level structures might influence the work experience, particularly when countries can be arrayed on a continuum of policies or structures (for example, strength of state welfare versus dependence on corporate welfare) or where countries are similar but differ in the structure of interest (for example, Canada and the U.S. are largely similar countries with differences in the state provision of healthcare and retirement benefits; some implications of this difference are explored in Chapter 2).

### **Labor Process Theory**

I turn to a discussion of one theoretical perspective that complements the political economy perspective and helps focus on the employment relationship: labor process theory, or LPT. While the political economy perspective focuses on larger structures, labor process theory focuses on meso-level structures such as industries and firms. The focus here is on the work relationships of capitalism, as well as individual agency. Labor process theory has been criticized for ignoring or diminishing the role of larger political and economic structures. While there are some discussions of linking LPT more directly to broader political economy work, these are

somewhat half-hearted. Edwards advocates for contextualizing “as far as needed for the task at hand” (Edwards 2010). Jaros reminds us that the responsibility of LPT is different from the responsibility of the researcher; labor process theory must describe the relationship between capital and labor, and researchers must provide context for their work (Jaros 2010). LPT is not grand theory, nor does it aspire to be; the focus remains steady on the production process. Two leaders in the field, Paul Thompson and Chris Smith, have written several state-of-the-field analyses (Thompson 1990, Thompson and Smith 2000, Thompson and Smith 2010). I draw heavily on their histories in this overview of the theory, its development, the state of the art today, and how it can be employed in analyses of small firms and individual identities.

Labor process theory is in fact a theoretical perspective that is rooted in the indeterminacy of labor (O’Doherty and Willmott 2009). As Marx noted, labor power is necessary to create value in any good; as an example, an apple is worth nothing hanging in a tree – someone must pick it. In a capitalist system, laborers sell their labor power to capitalists. Yet with wages the capitalist is purchasing the *potential* for value creation, whose worth is yet undetermined, and must then extract that value from the laborer. To extend the example, a laborer can be hired to pick apples for an hour. It is in the capitalist’s interest that the laborer picks as many apples as possible in that hour. The laborer does not necessarily share this interest. Somehow, the laborer must be convinced to pick as many apples as possible (enter management); the reconciliation of these different interests is a central component of the labor process.

Thompson defines LPT as “an emphasis on the dynamics of control, consent and resistance at the point of production” (Thompson and Smith 2010). Core LPT, as articulated by Thompson (1990), is based on four themes:

- The labor process generates surplus value, which is a central function of the economy and therefore a privileged focus for analysis.

- Capital's logic of accumulation leads to constant improvements in technology and administration at work.
- Capital needs to control labor to support valorization (the production of surplus value in addition to use value).
- There is a fundamental structural antagonism between capital and labor, which can also extend to other relationships within the structure of production. However, managers must elicit consent from their workers, so there is a cycle of consent and resistance.

LPT draws very heavily on Marx and the dynamics of exploitation and struggle in the workplace between labor and capital, but does not necessarily share Marx's revolutionary spirit. The advantage of this approach, as described by Edwards, is that "It does not thereby reduce everything to the fundamentals of class relationships or read off concrete behavior from these relationships; it sees these fundamentals as underpinning the nature of workplace relations, but the specifics of any particular regime reflect many other factors and contingencies" (Edwards 2010). The structure of class relationships is influential, but not overly deterministic in this approach. While the theory is obviously suited to address work in manufacturing industries, it is also useful in new economy applications, where the definition of 'skill' is expanding to include both social and technical elements, and employers work more to recruit individuals with desirable social skills than they work to develop the skills of incumbent employees. This is a form of labor intensification, and the responsibility for skill development has shifted from the firm to employee (Thompson and Smith 2010).

### **Labor Process Theory Development**

#### *The Early Years: From Braverman to Bravermania*

Today's approach is often said to originate with Braverman's *Labor and Monopoly Capital* (1974), a work Thompson and Smith referred to as "*the text*" (2000:41, authors'



emphasis) in LPT<sup>9</sup>. An attempt to update and extend Marx<sup>10</sup>, Braverman's work focused on the labor process in Taylorist work systems, where he focused on the labor process itself and ways that capital divided tasks to concentrate decision-making in the hands of management and to deskill labor, further removing the power of laborers in the system. Current LPT also has intellectual roots in Burawoy's response to Braverman's deskilling thesis, which detailed ways that managers elicit consent from workers (1979). Also important as the origin of the theory, Edwards' discussion of systems of control at work (1979) detailed different forms of workplace control, and noted changes to the arrangements based on historic and economic development.

Braverman's work served as a catalyst for the field, which has been both a blessing and a curse. Braverman's untimely passing after publication of his magnum opus froze his theory, giving the work a strange quality described by Thompson and Smith:

...with the premature death of Braverman just two years after the publication of his book, his work became immutable: voiceless, eternal, and open to insult and injury, so that only others can mediate or 'correct' misinterpretations. This has permitted a more open entry into the 'debate,' and more diverse interpretations of issues raised by *Labor and Monopoly Capital*. People can say what they like without fear of libel. In this sense, death spawned Bravermania. (Thompson and Smith 2000: 41).

The field was very vibrant in the US, Europe, Australia, and Canada during the late 1970s and early 1980s. However, Braverman's work was subject to backlash and associated with factory

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<sup>9</sup> It is important to note that Thompson and Smith are somewhat sardonic in this reference; they see Braverman's text as an important and influential work in the field, but are careful to document how the field has moved away from Braverman and how little utility there is in work that "elevates a single text to center stage – reproducing the Anglo-American terms of the debate and preventing the construction of a dynamic theory" (2000:46). Braverman inspired the field and launched the line of discourse, but nearly four decades later orthodox adherence to his text is not necessary or helpful in the ongoing development of LPT.

<sup>10</sup> Though drawing quite heavily on Marx, scholars have noted that Braverman was selective in his use of Marx's works. Specifically, Rowlinson and Hassard (2000) note that Braverman ignored Marx's labor theory of value, and the law of the tendency of the rate of profit to fall; Braverman also framed his argument in terms of domination rather than exploitation. There is some debate as to the extent to which these elements of Marx's theory can be altered or ignored while still retaining their value. For a discussion of this debate see Grugulis and Knights' (2000) glossary entries on these terms and fundamentalism, and Thompson and Smith's (2000) discussion of return to orthodoxy.

work rather than labor process itself, and work scholars in the US moved on. Braverman's deskilling thesis has been challenged and defended, accused of simplification and lauded for its extension of Marxism. As Delbridge notes, "'Labour Process Theory' appears to have at best a somewhat mixed reputation among researchers of work and organization. For many it is redolent of a structurally determinist Marxian approach that is unsophisticated, inadequate and out of time" (2006: 1209). In the US, it was supplanted by core and periphery theories, and flexible specialization hypotheses. Yet while today US scholarship largely ignores the labor process debates, dialog has continued elsewhere.

### *Second Wave LPT: The British Years*

Given the extent that Braverman is associated with LPT, it is not surprising that many have moved on to other theoretical perspectives. Yet while LPT began with Braverman, it did not end with him. Thompson and Smith note:

Given the association of ideas and text, for many people labor process theory (LPT) will forever be associated with the dual theses of the dominance of Taylorism and deskilling. In fact the second wave of LPT, built from responses to, commentaries on, and applications of Braverman until the mid-1980s, was a fruitful one (Friedman 1977, Zimbalist 1979, Rubery 1978, Edwards 1979, Burawoy 1979, 1985, Edwards and Scullion 1982, Pollert 1981, Littler 1982, Thompson 1989). Combining elements of a Marxian analysis of work and political economy with a Weberian emphasis on employment relationships and segmented labor markets, it produced rich accounts of workplace life, innovative control typologies, and a focus on new issues such as gender and consent. (Thompson and Smith 2000: 41)

Work continued on LPT, mostly in European and Australian scholarship. The preservation of LPT and geographic shift in the center of scholarly influence can be attributed in part to the aforementioned four-point core LPT theory, articulated by British scholar Thompson (1990), but also to the British-originated International Labour Process Conference and its affiliated publications (Grugulis and Knights 2000b). The yearly conference and strong intellectual hub in Europe has helped maintain LPT's development abroad. The field of inquiry originated by one

US scholar, Braverman, whose early key contributors included Americans Edwards (1979) and Burawoy (1979), is now more commonly associated with European and Australian scholars such as Andrew Lloyd Friedman, David Knights, Damian O'Doherty, Al Rainnie, Chris Smith, Paul Thompson, Chris Warhurst, and Hugh Willmott, among others.

Today, LPT is less a unified theory than a theoretical perspective with several variants (including several very heated debates, see for example O'Doherty and Willmott 2000/2001's criticism of structuralism and anti-structuralism in LPT, Friedman's 2004 response, and O'Doherty and Willmott's 2009 response to the response). Though the focus of this work is often in factory-based production, Smith, Knights, and Willmott (1991) note that there is no reason it must be limited to manual labor as Marx's work on productive labor was not necessarily limited to the production of a physical commodity; indeed, a growing literature around call center work demonstrates that even jobs that require technological mastery and are service-oriented can be quite similar to factory production in its control and surveillance (Russell 2008).

In 2000, Thompson and Smith identified four paths the LPT debate had taken: a return to orthodoxy (those who wanted LPT to return to its Braverman or Marxist underpinnings), a search for a new paradigm (arguing that a departure from Marx and Braverman is necessary given newer characteristics of capitalism, such as flexible specialization, knowledge economy theories), diversions (phenomenological and poststructuralist focus on subjectivity), and renewal (continuation and extension of the core LPT theories). Thompson and Smith identify themselves as members of the fourth camp; this is the camp from which I have drawn most directly in my analyses.

#### *Special Issues: Labor process and the small firm*

The impact of small and medium enterprises (SMEs) on the economy is surprisingly sizeable. According to the US Small Business Administration, small firms (which it defines as

independent businesses that employ fewer than 500 employees) represent 99.7% of all employer firms, pay 44% of US private payroll, employ half of private sector employees and 43% of high tech workers. Small businesses produced 65% of job growth between 1993 and 2009. They are also a dramatic source of innovation, outproducing large patenting firms at patents per employee by 13:1 patents (US Small Business Administration 2010).

Despite the clear statistical importance of SMEs, what exactly SMEs means for the modern economy remains hotly contested, and there is great debate about how even to assess the SME impact. One issue is the lack of consistency in size categories, which are not always even consistent within countries (Barrett and Rainnie 2002, Storey 1994, Wilkinson 1999). While the US Small Business Administration considers firms to be small at fewer than 500 employees, the European Commission criteria actually considers firms with more than 100 employees (100-499) to be medium, and further distinguishes a “micro” category of firms (employing fewer than 10 persons).

Another issue with assessments of SMEs is small firm exceptionalism, based in the assumed homogeneity of small firms (Wilkinson 1999, Barrett 2000, Barrett and Rainnie 2002). One manifestation of this assumption is the “small is beautiful” scenario (Schumacher 1973) where “small firms facilitate close and harmonious working relationships....such firms demonstrated good people management with better communication...while there was also greater flexibility and low levels of conflict” (Wilkinson 1999: 208). On the other hand, SMEs may be a “bleak house” where firms are

dictatorially run with employees suffering poor working conditions, and including inadequate safety conditions who have little involvement in the running of the business....Good human resource management is in reality a ‘bleak house’ (Sisson, 1993) or sweatshop, with the assumption made that since no-one complained, employees are satisfied....The ‘flexibility’ is more akin to instability in that there are few procedures or systems within which to work. (Wilkinson 1999: 208)

However, Wilkinson (1999), Barrett (2000), and Barrett and Rainnie (2002, 2004) note that size itself may not have that great an impact on firm industrial relations. Barrett and Rainnie (2002) advocate an approach that “does not assume a priori that there is anything unique about small firms or indeed that any such category has validity” (Barrett and Rainnie 2002: 418). Rather, they advocate a dialectical approach based on the use of LPT to analyze small firm relations. They argue, in keeping with LPT, that “production is a social act, not simply the result of individual effort...the market is a social institution not the natural result of aggregate individual effort” (Barrett and Rainnie 2002: 423).

The dialectical approach is comprised of three principles: totality, change, and contradiction. It links seemingly separate parts of the world (Barrett and Rainnie link small and large firms), arguing they are in fact related. Barrett and Rainnie focus initially on context of the SME rather than the SME itself; they discuss the process of centralization and concentration now occurring as the state role is changing in an internationalized economy. The societal context of firms is important, as is the way that small firms relate to larger ones.

Barrett and Rainnie’s proposed dialectical approach includes an accompanying typology of SMEs based on how they relate to larger firms: SMEs can be dependent, dominated, isolation, or innovative (Barrett and Rainnie 2002: 425-6, based on Rainnie’s 1989 typology). Dependent firms complement the interests of large firms (e.g. sub-contractors), dominated firms compete with large firms through exploitation (e.g. firms that exploit family labor), isolation firms fill a particular niche or geographic area that is unattractive to larger firms (e.g. restaurants or hairdressers), and innovative firms develop ideas larger firms may not be able to, though large firms often appropriate the results (e.g. information technology startups). Though these categories are not exclusive – several firms in the WANE study alone could fit into both innovative and isolation, or innovative and dependent, etc. – they offer a useful starting point for analysis. Most WANE firms fit into the innovative category.

### *Special Issues: Labor process and social structures of identity*

In recent years, LPT has been influenced by work surrounding the social structures of identity, in particular race and gender. This is a natural fit for LPT, which views identities as multiple and contingent, shaped by influences both at work and outside of work (Jaros 2010). Much of this work has focused on intersections of social structures (Acker 2006; Collins 2000; Durbin and Conley 2010) which offer a more complete way to look at inequalities (for a discussion of intersections of social structures such as age, gender, ethnicity, and class, see McMullin 2004). LPT often sees identities as secondary; as described by Edwards, “Worker identity and other issues are relevant to the extent that they affect the terms of the struggle, but they are not a constituent part of the analysis in their own right” (Edwards 2010). Acker sees class as ‘using’ race and gender; in essence, identities are secondary to a central class issue of inequality regimes, which she defines as “the configuration of inequality-producing practices and processes within particular organizations at particular times” (Acker 2006). To date the focus in this area has been on gender and race, with little introduction of age to the discourse.

### **Lessons from Political Economy and Labor Process Theory**

The political economy perspective and labor process theory are both theoretical perspectives that provide an orienting framework for work analysis. These perspectives remind us to examine structures both large and small, paying attention to the policies, industry contexts, relationship to production, social structures of identity, and other structural forces that shape the work experience. It is with this in mind that I begin my analysis of age relations in new economy work.

## **DISSERTATION OUTLINE**

My research questions seek to understand the multi-level influences on age relations and the modern worker: workers are influenced by each other, by firms, and by larger societal structures. Following a chapter on methods, each succeeding dissertation chapter examines a component of these influences, drawing upon the theoretical perspectives outlined above and using WANE data. Taken as a whole, the chapters are meant to elucidate the situation of IT workers at a time of recovery, following the IT boom of the 1990s and the IT bust of the late 1990s and early 2000s but preceding the dour economic climate of present day (2008-2009). These IT jobs are a class of white-collar work firmly planted in the new, knowledge-based economy, operating in a globally competitive industry.

### ***Chapter 2. Data and Methods***

This chapter introduces the principal source of data for the dissertation, the Workforce Aging in the New Economy study, and the approaches I take to analyze both the qualitative and quantitative data in this study.

### ***Chapter 3. The Societal Context of Information Technology: Risk Allocation and its Implications for Firms and Workers***

This chapter is an examination of how government social welfare structures influence the social psychology of workers in different welfare regimes, and how firms can mediate risks borne by workers in less generous regimes with particular regards to feelings of stability about two sources of social welfare that are of particular interest for older workers: healthcare and retirement. I use data from the four WANE study countries, all of which are liberal welfare regimes in the Esping-Andersen typology, and argue for the further distinction of these nations into high liberal (Australia and the US) and low liberal (Canada and the UK) regimes. I first develop an index of worker anxieties using survey data from all four countries, and compare survey data on feelings of stability between nations. Next, using interview data, I compare one

high liberal and one low liberal regime (US and Canada, respectively) to investigate how differences in regime policies affect discourse surrounding risk. Finally, I examine the firms with the lowest worry index scores in high and low liberal regimes to see how the firm can make a difference in employee perceptions of risk. While high liberal regime workers are concerned about basic access to health insurance and pensions, workers in low liberal regimes are concerned about more minor issues such as supplementary insurances and benefits. This leaves employers in high liberal regimes with more expensive paths to fostering employee feelings of stability. I will discuss the implications for workers and for firm competitiveness in a globalizing economy.

#### ***Chapter 4. Age Relations in the Modern Workplace: Lessons from Political Economists and Labor Process Theory***

When asked to describe older and younger workers in the workplace, many WANE workers employ manager/subordinate language that might imply age relations are strained in part due to socio-economic conflict rather than a more straightforward discrimination against the aged (or the younger workers, who are also stereotyped). Many of the younger workers in the U.S. sample equate ‘older’ with ‘manager’ and describe older workers as such. Additionally, many of the older workers in our sample equate ‘younger’ with ‘entry level,’ and describe them as such. This suggests that much of what we consider to be age designation and even age discrimination in the workplace may in fact be rooted in larger conflict surrounding power at work, speaking to the relevance of the political economy perspective and labor process theory for understanding age relations in the modern workplace. This chapter will present descriptive data from US WANE, grounded in the broader data pooled from survey responses in the four WANE countries, finding that age relations are in many ways closely tied to themes from the political economy and labor process theory perspectives.



***Chapter 5. The Impact of Age Relations and the New Economy on  
Information Technology Workers: Discussion and Conclusions***

This chapter assesses the outlook for IT workers given the findings of Chapters 3 and 4. Particular focus will be placed on areas of increasing risk for the modern worker, given the context of the new economy, and potential improvements and pitfalls for the worker moving forward. I will address lessons learned for theory and methodology in the study of new economy workers, and describe directions for future research.

## CHAPTER 2.

### DATA AND METHODS

#### CHAPTER OBJECTIVES

This chapter introduces the primary data source for this dissertation, the Workforce Aging in the New Economy study (WANE), an international research program that employed a case study methodology to address themes surrounding age and employment relations in IT.

#### INTRODUCTION

The WANE project is an international, cross-comparative study of information technology (IT) workers. The project uses a case study methodology to address the following five research themes, as outlined on the project web site:

Five WANE research themes:

1. The transformation of **employment relations** in IT industries and occupations.
2. The dynamics of an **aging workforce** in IT labour markets.
3. **Diversity** (including gender, race, ethnicity, and age relations) in IT employment.
4. How IT employees negotiate and manage their careers as they age within the context of **life course transitions**, involving: school, work, parenthood, retraining, job exit, retirement.
5. How **human resource management policy** and practice addresses issues of aging workforces, life course issues, and barriers to employment.

(WANE)

Six countries were included in the study, which had a headquarters at the University of Western Ontario and was funded by the Social Sciences and Humanities Research Council of Canada (SSHRC). Countries included the U.S., Australia, Canada, England, Germany, and the

Netherlands. Methodology was most consistent across Canada, Australia, England, and the U.S., and therefore these are the four countries I have focused on in my analyses. Case study data collection for the project took place between 2004 and 2006.

The project employed a mixed-method, case study design. IT is a demographically young and technology-enabled sector, whose very nature is epitomized by continual change at a rapid pace. While the industry enjoyed a ‘boom’ in the 1990s, the 2000s brought a subsequent ‘bust’ and economic downturn that changed the landscape of the industry. The process of change and evolution continues as surviving companies and new upstarts navigate a slow recovery period. Given the drastic change the industry recently has recently undergone due to economic forces, and the continuous change it undergoes due to changing technology, the case study approach is quite appropriate as it emphasizes the culling of in-depth, contextualized data (Marshall 1999). Not only do case studies emphasize a multivariate approach to data collection, so desirable in work studies (Kalleberg and Berg 1987), but they are also quite ideal for studying time and place. As noted by Ragin, “Case studies, by their nature, are sensitive to complexity and historical specificity” (Ragin 1987), lending themselves to the study of this continuously changing industry. The WANE case studies employ both quantitative and qualitative methodology, drawing the benefits of both approaches – the generalizability of quantitative methods enhances the detail-orientation and customizability of qualitative methods. While case study data may be seen as highly interpretive, findings can still be structured within the framework of a consistent theoretical approach and thematic organization (Marshall 1999). Among WANE team researchers, a life course perspective was prevalent, which provided that important consistency and organization in such a large-scale, multi-continental study effort.

The WANE study used two major data collection instruments that were uniform across regions: semi-structured interviews with selected employees at all levels in WANE firms, and a web-based quantitative survey of all IT employees in WANE firms. These data, along with

researcher observations, were compiled to create case study reports, a third data source that offered the most complete perspective on the firms as cases.<sup>11</sup> Altogether 47 cases were completed internationally (11 in Australia, 18 in Canada, 7 in the U.K., 11 in the US). I will first address the case selection and sampling, followed by a description of the web survey, interviews, and the case study reports.

## **CASE SELECTION**

The WANE data were gathered in four study regions: Australia, Canada, England, and the US. Within each study country there was a separate research team, affiliated with a research university (the US and Canadian country teams encompassed multiple universities) and studying the IT industry of its surrounding region. Each country team was based within a region that had a thriving IT industry. For example, in the US, the team included investigators from the University of North Carolina at Chapel Hill, Florida State University, Georgia State University, Pennsylvania State University, and Wake Forest University. The team was based at the University of North Carolina Institute on Aging, located in the larger Triangle region of North Carolina, itself home to the Research Triangle Park (RTP). RTP is a major IT region, smaller than Silicon Valley but larger than many others. This was the primary data collection site. A satellite data collection team was based at Florida State University, within the Tallahassee area of Florida. Tallahassee is an area with a smaller but still active IT industry; the bulk of cases were snowball sampled from a major regional professional organization.

Instruments were the largely uniform across the regions, with minor adjustments to fit the language and policy environments of each country. Table 2.1 outlines the specific areas within the countries and dates of the case study data collection efforts.

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<sup>11</sup> For further detail regarding WANE study methods, please see Jovic, McMullin, and Comeau, forthcoming; McMullin and Marshall 2010.

Table 2.1. Time and location of WANE data collection, by country†

Team	City/Region	Case study start	Case study end
Australia	Melbourne, Sydney, Brisbane, the Gold Coast	October 2004	March 2006
Canada	London, Ottawa, Calgary	September 2004	October 2005
England*	Cambridgeshire, West Midlands, London, South East England, South West England	May 2004	May 2005
United States	North Carolina (NC) - Research Triangle Region, Florida (FL) - Tallahassee	July 2004	February 2006

\*this team was also involved in a case study of a German IT firm. Researchers in Germany and the Netherlands conducted a further 8 case studies in those countries.

† Table reproduced with permission from Jovic, McMullin, Duerden Comeau (forthcoming).

Each WANE case is an IT firm. To qualify for the study, each firm had to be primarily in the software-related IT business, have been operational for a minimum of one year, have a minimum of four staff members, and agree to support the study. Employers were asked to hold introductory meetings or otherwise notify staff of the study and its objectives, to allow employees to complete the web-survey and semi-structured interviews at work, and to allow the researchers access to the office during the data collection. For firms that had multiple offices, only the offices in the study region were included in the WANE study. All firms in the study were small and medium employers, with a minimum firm size of 4 employees and a maximum firm size of 250. Most (79%) had 20 or fewer employees. Nearly three quarters of firms were under 10 years old (see Table 2.2).

Table 2.2. Firm characteristics†

	Region					Total
	Australia	Canada	England	U.S.	N	%
<u>Firm size</u>						
4-20	9	17	4	7	<b>37</b>	79%
21-99	1	1	2	3	<b>7</b>	15%
100-250	1	0	1	1	<b>3</b>	6%
<u>Firm age</u>						
>5 years	2	4	3	2	<b>11</b>	24%
5-10 years	5	6	2	6	<b>19</b>	40%
11-20 years	2	7	1	3	<b>13</b>	28%
21+ years	2	1	1	0	<b>4</b>	8%

† Table reproduced with permission from Jovic, McMullin, Duerden Comeau (forthcoming).

## **INSTRUMENTS**

Two major sources of data are used in this dissertation: web-based surveys and semi-structured qualitative interviews with WANE firm employees. Additionally, this analysis is informed by case study reports generated by each study team. I will discuss each in turn.

The web survey included six major modules of questions: Education and Training, Current Employment, Past Employment, Work Environment, Your Life, and About You. All IT employees in the WANE firms were invited to participate. The survey was conducted under contract with a private data company, MSI International. Invitations to the survey were issued on paper and by email at the beginning of each case study, and reminder emails were sent to non-responders. The survey took approximately one hour to complete, and respondents were able to log on and off to complete the survey in multiple sessions, if desired. MSI provided the study team with the data in SPSS format, and provided additional methodology reports for the survey data.

Semi-structured interviews generally took place at the respondent's place of work, lasted approximately an hour, and were conducted by members of the study team, including the author. Questions were open-ended and focused on experiences of IT work, work family balance, and aging in the field of IT. Consent was obtained prior to the interview and participants were encouraged to ask questions; in addition, interviewers stressed that consent might be withdrawn at any time during the project and questions deemed uncomfortable could be passed over. Most interviewers re-confirmed consent once taping began.

Interviews were transcribed and housekeeping codes were applied by the international team using NVivo software. These broad codes fell into six major coding categories, including Employment Relations, Diversity and Employment Relations, Life Course Transitions, Human Resource Management, Current Employment/Employer, and Health. In the process of coding,

coders on each international team finished “first pass” coding and then a second coder from the same team reviewed how each document was coded. When there were disagreements, the two coders discussed the code and reached a compromise.

Data availability by country and for the total sample is presented in Table 2.3. Overall, 399 qualitative interviews were conducted with employees in case study firms (response rate = 86%). The web survey yielded 452 responses (response rate = 46%). Forty six of these respondents only partially completed the survey, finishing at least the first survey module but not completing the entire survey. There is overlap in the respondent populations between the web survey and interview respondents; 586 unique individuals participated in the study. Forty five percent participated in both the web survey and qualitative interview, 32% did the web survey only, and 23% did the interviews only (Jovic, McMullin, and Comeau, forthcoming; Marshall 2010).

Table 2.3. Interview participation, survey response, and partial completion rates†

Region	Interviews		Surveys			
	#	participation rate (%) <sup>1</sup>	#	response rate (%) <sup>1</sup>	# complete	partials (%) <sup>2</sup>
Australia	91	82	81	22	69	15
Canada	141	81	107	60	94	12
England	61	100	125	75	117	6
United States	106	90	139	50 <sup>3</sup>	123	12
<i>Total</i>	<b>399</b>	<b>86</b>	<b>452</b>	<b>46</b>	<b>403</b>	<b>11</b>

<sup>1</sup> participation and response rates are calculated using the number of interview transcripts/survey records out of the number of *eligible* respondents at each firm; eligible respondents are those who were invited to participate in the study

<sup>2</sup> “partials” refers to the proportion of incomplete survey records (i.e., those who completed at least the first section, but did not complete the entire survey; does not include question non-responses)

<sup>3</sup> One U.S. case, a medium firm of 100+ staff, experienced complications with data collection as company officials had not fully bought into study participation and as such, the project never really took off in that location. Removing these cases from the U.S. response rate yields a cleaned response rate of 67%. Responses from this company remain available for analysis.

† Table reproduced with permission from Jovic, McMullin, Duerden Comeau (forthcoming)

Table 2.4 outlines the sample characteristics for the interviews and web surveys. Both the interview and web-survey respondent pools skew quite young, with mean ages in the mid-to late-thirties (the mean age across countries was 38.4 for interviews, and 38.0 for surveys) and the range of ages for all respondents is 19-64 years. The sample is both pre-dominantly male (about

72%) and predominantly Caucasian (12.6% of interview respondents and 9.4% of survey respondents were minorities). Most are married (about 72-73%) and about half have children.

Table 2.5 outlines the job characteristics of the interview respondents. For the total sample, about 18% of respondents were in IT managerial roles, and 9.5% were CEOs or presidents for their companies. The average job tenure was around 5 years, with the US respondents having the lowest average job tenure (3.3 years) and British respondents having the longest (7.5 years).

Table 2.4. Sample characteristics†

	<b>Australia</b>		<b>Canada</b>		<b>England</b>		<b>U.S.</b>		<b>all regions</b>	
Interview/Survey	I	S	I	S	I	S	I	S	I	S
<i>N</i>	91	81	141	107	61	125	103	139	399	452
<u>Age (in years)<sup>1</sup></u>										
mean	37.6	38.1	37.2	37.4	40.0	37.8	40.0	38.7	38.4	38.0
median	37.0	35.0	37.0	38.0	39.0	36.0	41.0	38.5	38.0	37.0
range	21-	23-	19-	20-	22-	21-	23-	20-	19-	20-
% age 45+	61	62	62	63	63	64	63	63	63	64
	27.6	27.9	24.8	19.8	33.3	27.4	33.3	28.7	28.9	25.8
<u>Gender</u>										
% female	40.7	34.8	23.4	23.4	26.2	23.1	26.4	30.6	28.6	27.5
% male	59.3	65.2	76.6	76.6	73.8	76.9	73.6	69.4	71.4	72.5
<u>Marital status</u>										
% married/cohabiting	75.9	75.7	65.9	68.1	71.2	73.7	80.8	71.4	72.8	72.1
% single/never married	17.7	20.1	25.2	22.3	20.3	19.5	13.1	23.0	19.6	21.3
% separated/divorced	6.3	4.3	8.9	9.6	8.5	6.8	6.1	5.6	7.5	6.4
<u>Parent status</u>										
% with children	45.9	45.7	54.4	51.1	67.9	51.7	61.6	47.6	56.4	49.3
<u>Minority status<sup>2</sup></u>										
% visible minority	17.6	5.8	6.4	9.6	6.0	5.1	20.7	15.4 <sup>2</sup>	12.6	9.4

<sup>1</sup> For the interviews, “age” was reported at the time of the interview; for the surveys, “age” was calculated as @ 2005 using the respondent’s birth year; this is reflected in discrepancies in age range

<sup>2</sup> U.S. survey respondents were asked a filter question “Are you Spanish/Hispanic/Latino” followed by a “select all that apply” race question; all other regions were asked “Are you a member of an ethnic/visible minority group?”

† Table reproduced with permission from Jovic, McMullin, Duerden Comeau (forthcoming).



Table 2.5. Interview sample characteristics - occupations†						
	Australia	Canada	England	U.S.	All regions	N
Occupation						398
IT/technical role %	48.4	41.8	37.7	36.2	41.2	164
IT/other role %	14.3	14.2	14.8	34.3	19.6	78
IT/management role %	19.8	17.7	23.0	17.1	18.1	75
Non-IT role	9.9	13.5	13.1	6.7	10.8	43
CEOs/Presidents	7.7	12.8	11.5	5.7	9.5	38
% contractor	7.8	12.1	0	0	6.3	398
Job tenure (in years)	5.2	5.3	7.5	3.3	5.1	388
mean	3.0	4.0	7.0	2.0	4.0	
median	0-29	0-21	0-30	0-19	0-30	
range						
N	91	141	61	103	399	399

†Table reproduced with permission from Jovic, McMullin, Duerden Comeau (forthcoming).

Finally, each study team was responsible for the creation of case study reports. These documents offered overviews of each case, including details about data collection, firm demographics, firm histories, industrial contexts, and preliminary analyses of interview and survey data. They became another data source, as they served rich contextualized data about the state of each case and offered insights from researchers who had participated directly in data collection efforts. Given the international nature of the work, these insights have proven valuable for the interpretation of the WANE data. In addition, each study team at the outset of the study wrote country reports that provided contextualized data about the IT industry in each country, including demographics, key issues, and recent trends. At the conclusion of the data collection, each team returned and wrote a final country report, outlining some key findings from the WANE study. These documents further illuminate the country context and help the researcher take a more international view of the issues discussed.

Having outlined the methodology for data collection, I now turn to analysis.

## **CHAPTER 3.**

### **THE SOCIETAL CONTEXT OF INFORMATION TECHNOLOGY: RISK ALLOCATION AND ITS IMPLICATIONS FOR FIRMS AND WORKERS**

#### **CHAPTER OBJECTIVES**

I begin my integrated approach to the study of age relations in the US with an examination of the state context and its impact on both firms and workers. I focus this analysis on risk, as the increasing risk burden borne by individuals is a central characteristic of the modern economy. US workers operate in an economy that offers fewer protections from risks than workers in other liberal nations as they have no universal health protection and US public pensions are more limited than those of other nations; this difference in risk burden affects how individuals relate to their employers and what they seek from the employment relationship. I explore these dynamics of risk by comparing US risk allocation and WANE respondents' anxieties surrounding stability and security as compared to Australia, Canada, and the UK, focusing on two major social welfare domains of particularly salient to older workers which are, absent comprehensive state policies, often shouldered by firms on behalf of their employees: health care and pensions. I discuss the implications for workers and for firm competitiveness in a globalizing economy.

#### **INTRODUCTION**

The willingness to take big risks can lead to big rewards in the new economy, especially for employees in young enterprises beginning to succeed. Small, young companies can offer individual employees the chance to help steer the company, or even the sought after company sale

or initial public offering that enriches all employees. They also offer the risk of failure, eliminating wide swaths of employees through layoffs or folding entirely. This is particularly true in the IT industry, where fortunes are made and lost through rapid innovation (or lack thereof). In this way, instability in a young enterprise can be simultaneously alluring and worrisome to potential employees.

This dichotomy between employment risk and reward can be more enticing for some than for others. The level of employment-dependence (i.e., the extent to which workers rely on their employers to provide fundamental benefits) that individual workers have is related to their needs and goals, location in the life course, and the societal context in which they live. In countries with more privatized welfare approaches such as the US and Australia, employees will look to employers as the primary means to meet these needs. For countries with more universally generous social welfare programs such as Canada and the UK, the government may play a larger role, and the importance of the employer for individual well-being is somewhat less pressing. In essence, while workers in the US and Australia perform a high wire act without a very large safety net, workers in Canada and the UK know that they have a broader, more reliable net to catch them should they fall. This affects the nature of the employment relationship, as workers in nations with high employment-dependence face greater pressures to maintain an employed status. Therefore, high employment-dependence is likely to produce greater feelings of anxiety in societies where the state bears less of the worker's risk. These pressures are not distributed evenly throughout the population; workers with greater health care needs (those with families and older workers) or those closer to retirement age will feel the effects differently than young, single, and childless workers.

Given the instability that workers face in the modern economy, which is typified by a transfer of risk from the state and employers to the employee (Beck 1992), the differences between countries with regard to social welfare policy and feelings of stability have significant

implications for those workers in high risk, high reward potential enterprises. One way to examine risk in these settings is to look at workers' worries, which serve as markers of the experience of risk at the individual level. Using data from the Workforce Aging in the New Economy (WANE) project, this chapter will examine the worries of workers in the high risk, high reward environment of the information technology industry.

I begin with a discussion of the US social welfare environment as compared to those of three other countries classified by (Esping-Andersen 1990) as 'liberal' welfare regimes: Australia, Canada, and the UK. Though these nations are in many ways quite similar in their approach to welfare, and quite distinct from more universal welfare nations such as those in Scandinavia, they have different levels of universality and generosity in their societal welfare programs. The grouping of all four into one category muddies important differences in benefits between the countries, with some countries assuming more risk on behalf of workers than others. I argue for the creation of two categories within the liberal category, *low liberal* (Canada and the UK) and *high liberal* (Australia and the US), to capture important differences in the universality and generosity of benefits between these regimes. This establishes the social welfare context of IT work. I then explore the impact of this context on firms, first comparing discussions of risk in one low liberal (Canada) and one high liberal (US) nation, and then I explore ways that firms increase feelings of security for their employees.

This investigation addresses the following research questions, outlined in Chapter 1:

- What is the societal context in which these workers engage in paid work?
  - How does the risk experience of US workers compare to that of workers in other nations?
  - How do individuals perceive that risk?

- Can firms moderate the anxieties of their workers that are caused by their nations' welfare regimes?
  - How might the different contexts of risk affect human resource practices of firms?

### *Chapter Overview*

I will begin with an overview of risk in modern society, followed by a discussion of social welfare regimes and the assignment of low liberal and high liberal categories of welfare regimes. Next I will discuss the IT context, describing the high-risk aspect of IT business in the new economy, followed by a discussion of the WANE study.

To address the research questions outlined above, the analysis is conducted at two levels: that of the welfare regime and that of the firm. At the welfare regime level I focus on two areas of social transfer that differ between the nations, which are also the biggest two groups of social transfers among OECD nations: pensions, which average 7% of GDP, and health benefits, which average 6% of GDP (OECD 2009b). These areas are of particular interest as they are sources of risk that are often shouldered by the state in more generous welfare regimes such as the Scandinavian countries, yet in liberal welfare regimes the social policies often assume employer provision of these benefits. This creates a system of high employer-dependence for workers in these regimes, which can be expected to vary depending on the comprehensiveness of welfare provisions that are offered by the state.<sup>12</sup> First, I will provide a general overview of survey data regarding worker worries, values, job rewards, and assessments of personal financial stability. I use data pooled across WANE countries, noting country differences where applicable. I then

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<sup>12</sup> Future studies on comparative risk in this industry might focus on unemployment benefits, and labor market policies such as right-to-work policies, legal guarantees of paid leave and holidays, or minimum wage policies. However, for this study I was interested in risk policies that are often shouldered by firms themselves on the part of their employees, and the pressures this places on firms and their employees. I have therefore limited analysis to these two major sources of transfer: health and pension policies.

directly compare interview data from respondents in one high liberal regime (the US) and one low liberal regime (Canada), analyzing respondents' discussions of worries, risk, and stability, with a particular focus on healthcare and retirement.

Next, at the firm level I examine firm practices that can alleviate employee concerns, focusing on how these differ by welfare regime context and what practices are universal across welfare regimes. I select the two firms in each country with the least worried employees for this analysis, focusing on what characteristics might intervene to alleviate worry for workers in this high-risk field. Finally, in my discussion and conclusions I will discuss the implications of my findings for firm competitiveness in a global economy, and how differences in single state welfare policies such as healthcare can make a difference for workers who might seek employment in these high-risk, high-reward potential firms.

## **RISK ALLOCATION AND THE MODERN WORKER**

As described in Chapter 1, risk was once a value-neutral term related to chance (Lupton 1999) that has a negative connotation in current discourse, often referring to the chance that something might go wrong (Amoore 2004; Hacker 2006). Risk can be distributed in several ways, and different levels of society can bear the burden of risk for individuals in areas such as employment, health, and retirement. The three approaches I will focus on in this analysis are the assumption of risk by the individual himself (micro-level assumption of risk), or by the state (macro-level), with employers (meso-level) serving as intermediaries whose roles vary depending on the micro/macro balance of the welfare regime.<sup>13</sup> Societies typically utilize a combination of these approaches, weighing more heavily toward one end or the other on an individual/state continuum of assumption of risk. The role of the meso-level is therefore variable depending on the general balance of risk; in societies where there is a strong individualist or micro-level

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<sup>13</sup> Other adaptations can also operate at the meso-level, including kinship, church, or charity assumption of risk.

assumption of risk, the meso-level can offer an extra buffer of protection against risk for individuals. In essence, when the state does not provide a very broad safety net, firms can step in and offer to protect their employees from risk (especially through health care policies and pension plans, which can be quite expensive for individuals to purchase).

Societies that favor individualist assumption of risk are part of what Beck (1992) terms “the risk society,” where uncertainties abound and are unavoidable. The term is described by Marshall and Bengtson as “[a society] in which social institutions provide less ‘insurance’ against the vicissitudes of life, such as job loss or loss of one’s health, and individuals are expected to assume responsibility to navigate these risks” (Marshall and Bengtson, forthcoming). A prime example is the US, where the state bears some, but not all, risk, mainly through safety net and limited entitlement programs. A great deal of risk in such a regime is borne privately, with employers bearing some risk for more valuable, long-term workers in what Hacker refers to as a “divided welfare state” (Hacker 2002). The evidence for the importance of both is striking; as discussed in Chapter 1, taken as a whole the U.S. has one of the least generous states in the developed world for public spending; yet when private benefits are accounted for, the proportion of US GDP devoted to welfare<sup>14</sup> provision is actually comparable to European counterparts (Hacker 2002:7, 14-15). In health care, accounting for private spending actually puts US spending above that of other nations (OECD 2009d), another indication that protection from risk is expensive for private individuals and employers in the US. This gives individuals all the more incentive to find employers willing to assume some of that risk. Workers who are employed by employers who provide healthcare and retirement benefits, and who are stable in that employment, can still find relative stability in this system.

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<sup>14</sup> While ‘welfare’ is typically described in terms of the application of state power to protect individuals from hazards in industrialized nations, and to provide for a minimum standard of living for citizens, Hacker notes that many of these private benefits actually serve the needs of, and are encouraged by, public policy. Therefore he employs the term ‘welfare’ to describe private benefits as well as public benefits, as I have here (for his discussion of the terminology see Hacker 2002: 10-12).

However, that population of workers is dwindling, creating a rise in worker-borne risk that the US welfare regime is not prepared to help with. Indeed, much of the US social security system and labor laws were built around the idea of stable, long-term employment in firms with internal labor markets and strong benefits (Kalleberg, Reskin, and Hudson 2000), despite the fact that this employment arrangement is not nearly as ubiquitous as it once was for many workers. Rather, workers today face what Kalleberg has described as precarious working arrangements, characterized by “employment that is uncertain, unpredictable, and risky from the point of view of the employee,” a departure from the three decades of stability enjoyed by workers immediately following World War II (Kalleberg 2009). Kalleberg highlights a number of factors that are evidence of this growing precariousness, including a decline in attachment to employers, increase in long-term unemployment, growth in perceived job insecurity, growth of nonstandard work arrangements and contingent work, and increase in risk-shifting from employers to employees (described as a shift away from defined benefits pension plans towards defined contribution pension and health plans).

These risk arrangements leave workers vulnerable to unanticipated events, as described by DiPrete (2002). Though workers who have completed higher education often align their personal lifestyles to long-range estimates of their own income level and wealth potential, it is becoming increasingly difficult in today’s society to make these estimates reliably. As DiPrete describes,

Such anticipation is relatively easy for the high-probability changes in life circumstances (e.g., the career mobility expected for one of higher education). It is also easy to anticipate that small or obviously temporary fluctuations in year-to-year income will average out over time. However, unpredictable (i.e., low, or seemingly low, probability) changes that have large and potentially durable effect offer a challenge to the behavioral theory implied in the concept of permanent income (DiPrete 2002).

Given the high level of risk individuals face in today’s society, understanding the role social welfare policies and firm benefits play and identifying specific policies and practices at both



levels is critical to provide a sense of stability for workers and to encourage societally-beneficial risk taking.

## **SOCIAL WELFARE ENVIRONMENTS**

Any discussion of individual risk must address the role of the social welfare environment. Social welfare refers to the sum of state action undertaken to alleviate the exposure of citizens to risks that threaten their well-being, such as healthcare or health insurance policies, safety nets for the unemployed or those who cannot work, and the provision or supplementation of pensions for older citizens. Perhaps the most cited (and controversial) work comparing welfare regimes is Esping-Andersen's *The Three Worlds of Welfare Capitalism* (1990), which divided nations into liberal, conservative, and social democratic welfare regimes based on the extent to which they divorced individual standards of living from market forces (his decommodification index). Liberal regimes (typified by the US) are those which value the free market above all else, offering minimal safety nets for their citizens and, for the most part, leaving citizens' well-being closely linked to the actions of the market. Conservative nations (typified by Germany) intervene more than liberal ones, though with an aim to preserve traditional societal hierarchies rather than to offer more universal benefits. Social democratic nations (typified by Scandinavian countries) are the most universal in their benefits, and the most successful in liberating individual standards of living from the market. All four study countries are identified as liberal welfare regimes under Esping-Andersen's welfare states typology (Esping-Andersen 1990).

Esping-Andersen's work on welfare regimes, while widely utilized, is not without its critics. Scholars have protested that there is an oversimplification to the three categories, that the accuracy of Esping-Andersen's methods is not perfect (Scruggs and Allan 2008), that the decommodification index is not the best measure, or that the 1990 publication is simply outdated given changes in country policies over the last two decades (Arts and Gelissen 2002; Bambra 2007; Orloff 1993; Scruggs and Allan 2008; Van Voorhis 2002). Scholars have offered various

alternative welfare states categorization schemes, based on choice of indicators or the use of different statistical analyses to determine their own welfare regime schemas (two good overviews of these alternatives are outlined in Arts and Gelissen 2002 and Bambra 2007). Those who include all four of the countries in this sample in their analysis tend to pull either Australia, the UK, or both into a new category, while largely leaving the rest together (Castles and Mitchell 1993; Kangas 1994; Korpi and Palme 1998; Shalev 1996) or return to Esping-Andersen's original categorizations (Wildeboer Schut 2001). This is in part due to the variety of measures used. Esping-Andersen based his original classification scheme on his own indices of decommodification, social stratification, and private-public mix. Studies that offer alternative classifications use a variety of alternate measures, such as aggregate welfare expenditure and benefit equality (Castles and Mitchell 1993), cluster analyses of decommodification (Kangas 1994), BOOLEAN comparative analysis of pensions decommodification (Ragin 1994), or healthcare services and decommodification (Bambra 2005) (these are but a handful of alternate classification schemes suggested – see Bambra 2007: 1099 for an overview of prominent critiques of the Esping-Andersen typology).

This variety of outcomes suggests that Canada and the US probably occupy a space pretty solidly in the liberal welfare spectrum, while the UK and Australia are operating at different extremes (or even in another category, with the UK moving into the socialist category) depending on the variables of interest. The variability also highlights the need to examine welfare benefits of interest more closely before using any welfare state typology; Esping-Andersen offers a useful orientation to the countries, but further classification work is needed. To that end, for this analysis I will discuss the specific context of health and retirement benefits for the US, as well as Australia, Canada, and the UK.<sup>15</sup> I will offer a classification grounded in Esping-Andersen's

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<sup>15</sup> For the purpose of this cross-national comparison, I have limited my discussion of welfare policies to the national level, using broad strokes to paint the picture of each country's welfare profile. There are still further nuances within each country, as many policies are determined at the level of state or province, but

typology, but one which acknowledges important differences among the countries with respect to health and pension welfare provision. I provide a brief overview of policy themes between the countries; for more detailed overviews of social welfare policies in each country, please see Appendix A.

### ***How They Compare: Welfare Policies across the Four Sample Countries***

The US stands alone in its very limited public coverage of health benefits. Even combining private and public insurance, a sizeable population of US citizens is uninsured. While recent healthcare reform measures purport to improve these numbers, new policies will not take full effect for years and reform was not a subject of discussion in the timeframe of the WANE study. The US healthcare system is also the most expensive, with a full 15% of GDP funding it (quite a leap when compared to the next runner-up, Canada, at only 10% of GDP – see Table 3.1).<sup>16</sup> Given the expense of US health care and the lack of a societal safety net, US workers have great incentive to maintain employment relationships that subsidize health insurance plans.

Table 3.1. Expenditures on Health, Percent of 2005 GDP

	Public	Total
Australia	5.9	8.8
Canada	6.9	9.9
UK	7.1	8.2
US	6.9	15.2
OECD	6.5	8.9

*Adapted from OECD Factbook 2009.*

Though the stakes are somewhat different, workers in other countries also have reasons to seek out employer-sponsored health benefits. The sizeable private insurance markets in both Canada and Australia reveal systems where public coverage does not necessarily cover

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federal benefits set the pace and states or provinces typically are only offering supplements to more generous federal benefits.

<sup>16</sup> While GDP is not a perfect measure of healthcare quality, as higher spending does not equal better results, it does give an indication of how healthcare is valued in a society. In the US, despite great inequality in insurance coverage, the healthcare system is nonetheless quite well-funded.

everything, or in Australia's case, where public coverage is somewhat lacking. The US government actually spends comparably to Canada and the UK on medical care (and higher than OECD average), but is quite limited in the portion of the population it covers. Australia is a full percentage point below the US in its GDP expenditures on healthcare, perhaps a motivating factor for a market in duplicate services. In health benefits, it appears that while the US is clearly the weakest public system, offering quite limited state insurance coverage to its citizens, Australia is also on the weaker side with a baseline insurance program that many citizens choose to supplement. It also appears that while the UK is the strongest public system with universal public health care, Canada can be placed on the stronger end of the spectrum.

The US is somewhat more generous with respect to public pensions, to which it devotes the largest percentage of GDP out of the four countries, as demonstrated in Table 3.2. Still, each of these countries is below the OECD average spending on public pensions of 7% of GDP. Additionally, all of these countries are quite high in terms of the percentage of retirement income provided by pensions and private investments rather than public benefits, with each more than doubling the OECD averages (OECD average is 20%, while the averages in WANE countries were 41% in Canada, 44% in the US, 45% in Australia, and 53% in the UK). The high percentage of income provided by these sources indicates that seniors in these countries are highly dependent upon pensions and private investments, largely in keeping with the logic behind the liberal classification of these regimes.

Table 3.2. Pension profiles for WANE countries sample, OECD data

	Mandatory Pension Replacement Rates <sup>17</sup>			% GDP Public Pension Spending	Life Expectancy		Old-age poverty: % 65+ with incomes under half median pop. Income
	Low Earner %	Average Earner %	High Earner %		At birth	At age 65	
Australia	67.0	41.6	33.1	3.5	81.1	84.9	27
Canada	76.5	44.5	29.7	4.1	80.4	84.5	6
UK	51.0	30.8	21.3	5.7	79.1	83.3	10
US	50.3	38.7	34.1	6.0	77.8	83.6	24
OECD	71.9	59.0	54.3	7.2	78.9	83.4	13

*Adapted from OECD (2009) Pensions at a Glance: Retirement-Income Systems in OECD Countries*

The mandatory pension replacement rates, which compare pensions to earnings the year prior to retirement, are generally low for all of these countries compared to OECD averages. The OECD average pension replacement rate is 59%, while the averages in WANE countries were 30.8% in the UK, 38.7% in the US, 41.6% in Australia, and 44.5% in Canada (OECD 2009c). Low earners received the best protections in Canada and Australia, where a majority of their income was replaced by pension. Despite the high percentage of GDP spent on public pensions, the US had the lowest low-earner replacement rate, and the second-lowest average earner replacement rate. The great US public pension expenditure may be due to the higher replacement rate for high earners; though 34.1% replacement for high earners is low compared to the OECD average of 54.3%, it is the highest of any country in this sample. And despite the high replacement rate for low earners and high earners in Australia, the country had a quite high old-age poverty rate, which at 27% is more than double the OECD average. The US was not far behind at 24%. Canada and the UK both had rates at or below 10%. It would appear that examining the overall quality of pension benefits, once again Australia and the US are at the bottom of the list and Canada and the UK are at the top.

<sup>17</sup> Pension replacement rates are calculated by the OECD based on pension requirement from all mandatory sources of income relative to individual earnings for a full-career worker entering the labor market in 2006. For Canada, the UK, and the US these are all mandatory public pensions; for Australia the figure includes mandatory private pensions as well as public pensions. Low earner figures are calculated based on an employee earning 50% of the average income, and high earner figures are calculated based on an employee earning 150% of the average income (OECD 2009c).

Given the variations in the state of health care and pension systems in the four countries, I modify Esping-Andersen's welfare states typology to include a sub-category of liberal welfare regimes. I will therefore classify Australia and the US as *high liberal* welfare regimes, where the markets remain central to the standard of living of citizens and only modest safety nets catch those who fall to the bottom. I classify Canada and the UK as *low liberal* welfare states, where the markets are still dominant but the safety nets are greater (and catch people before they fall, with greater universal offerings of benefits).

Having established the social welfare context of the four nations in the sample, I turn to the industry context.

### **RISKY BUSINESS: THE NEW ECONOMY AND IT WORK**

The four sample countries have experienced an increase in recent years in knowledge economy jobs, marked by a job market that is more exemplified by intellectual contributions than by physical labor or physical resource processing and production (Powell and Snellman 2004), as described in Chapter 1. Ranson described the new economy as characterized by "the promotion of growth and productivity, by the diffusion of information and communications technologies, in globalized and flexible workplaces, staffed by an educated, knowledgeable workforce, in a policy environment supportive of innovation and global competition" (Ranson 2003:9). She also notes that these factors have social implications for both organizations and workers, including "the restructuring of organizations to make them globally 'competitive'; the reorganization of work to make it 'flexible'; differential and selective diffusion of information and communications technologies at work; differential access to the "knowledge" resources needed to make people employable" (Ranson 2003:9).

The growth of knowledge work has occurred during a time when many of the work arrangements that previously protected middle class workers are on the decline, as described in

Chapter 1. The recent employment situation in North America is marked in part by a decline in stable, open-ended employment through firm internal labor markets, and a shift towards downsizing in good economic times, tying wages to performance, using temporary and contract labor, and outsourcing functions that are not central to firm missions (Cappelli 1999; Kalleberg 2000; Osterman 1999; Smith 1997).

As described in Chapter 1, Information technology (IT) work is an exemplar of knowledge work. Based entirely on computer, network, and internet systems, the IT industry is a relatively young industry; with a focus on new technologies, it is constantly evolving. Without the force of decades-old traditions (or for the most part, decades-old companies), IT can be simultaneously exciting and unstable, as evidenced by its notable ‘boom’ in the 1990s, followed by its ‘bust’ and retrenchment in the 2000s (Beckstead and Brown 2005). The bust was aggravated by the events of 9/11 and subsequent economic downturn; many IT companies rely upon contracts with larger firms and the larger firms tightened spending in response to recession. Respondents often described the boom phase as a golden era, or one of excess, while the bust was very tight and the current time was one of slow rebound. This instability is even more pronounced for IT workers employed by (or founding /co-founding) companies that are smaller and solely IT focused. While IT workers might be able to find greater stability and benefits at larger companies in unrelated businesses, often working as technicians, IT workers in small IT companies face the attendant risks of disbanding that come with nascent businesses (Aldrich and Ruef 2006).

## **DATA AND METHODS**

Situated in liberal welfare regimes both high and low, all of the case study employees were operating in environments where their personal well-being in both health and retirement was tied, in varying measures, to their performance in the market. Yet all of the case studies are also situated in a high-risk industry, where a strong market performance is not guaranteed and employers may not be stable enough to offer employees any shelter from personal risk. In an

effort to address the situation of risk in this context, I examine employee discussions of worry, security, and benefits to determine what their risk situation is, and how welfare states and employers affect that situation. For this analysis I examine two sources of data from the WANE study, which I will describe here briefly: web-based surveys of employees in all WANE firms, and qualitative interview data from selected firms (for a more in-depth discussion of the study methods, please see Chapter 1). The analysis plan is as follows:

General overview:

- Descriptive overview of WANE survey data related to risk experience of respondents (focus on values, rewards, expectations, and worry in the pooled web survey data)
- Construction of a worry index using answers to a ten-item series on worry in the WANE survey. Array firms on the index based on mean worry index scores of firm respondents.

Welfare states context:

- Analysis of risk in the social welfare context comparing survey data from one low liberal (Canada) and one high liberal (the US) country.

Firm context:

- Analysis of firm influence on risk experience of individuals, using least worried firms in Australia, Canada, the US, and the UK on the worry index.

### ***Web-Based Surveys***

The web survey data included a module of questions that are relevant to worries. This analysis makes use of questions relating to respondent worries, work values and job outcomes, and assessments of income and investments (a complete list of variables used in this analysis and their response categories is presented in Appendix B). Additionally, I construct a ten-item worry index using survey data, which I will describe in further detail in the Results section. These data are



used for analysis of pooled results of respondents in the WANE countries, and also for country comparisons. Additionally, I use the web survey to construct an index of worry, which I use to organize firms and select cases for further qualitative analysis.

### *Semi-Structured Interviews*

The second data source is a pool of semi-structured qualitative interviews with employees in the case firms, in addition to key informants from the two countries on which I focus. These interviews were with owners, CEOs, and managers of IT companies. To explore the dependent worry variable, I performed text searches in NVivo 7 for terms related to financial security<sup>18</sup>, benefits<sup>19</sup>, job security<sup>20</sup>, and the state of the economy or international stability<sup>21</sup>.

I conducted two separate analyses using the interview data: welfare-systems level and firm-level. For the welfare-systems specific analysis I focused in one high liberal and one low liberal country to examine in-depth: the US and Canada, respectively. These are two countries that are ideal for this analysis, as they are literally quite close; sharing a border, they have quite similar cultures and economies. However, they have different orientations to social welfare, as noted previously, with some very stark differences: the US offers no guarantee of health insurance and has a large uninsured population, while the Canadian government provides health insurance to all citizens; the US offers a much more limited public pension and has the fifth highest old-age poverty rate in the OECD, while Canada has a much more universally generous state pension scheme and the fifth lowest old-age poverty rate in the OECD. As demonstrated by the worry index construction process, US and Canadian respondents have differing levels of concern about the state of the economy. Clearly, the US respondents shoulder a much greater risk

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<sup>18</sup> Financial security terms: financial, income, invest, money, pay, salary, saving, security, wage

<sup>19</sup> Benefits terms: benefits, bonus, disability, health care, medical, insurance, ownership, pension, perk, retirement, unemployment

<sup>20</sup> Job security terms: downsize, layoff, security, redundant, redundancy, redundancies

<sup>21</sup> State of the economy/international stability terms: boom, bust, downturn, economy, globalization, terrorist, terrorism, war, 9/11

burden than their Canadian counterparts; my goal was to discover how the different stakes affected the ways that they discussed risk.

After an examination of how the welfare states affected perceptions of risk, I turned my attention to ways that firms could serve as risk buffers in this high-risk industry. I selected cases using the worry index I constructed with the web survey data. I arrayed firms based on the average worry index score of their employees, identifying the eight least-worried cases (two per country) for in-depth analysis. I used the same search terms as the welfare-state level comparison, and sorted the results into high liberal firm strategies, low liberal firm strategies, and universal strategies for the alleviation of worry.

## **RESULTS**

The results are organized at two levels of analysis: the country level and the firm level. I begin with an examination of the pooled web-survey data to provide an orientation to the overall pattern of risk in the four sample countries. Next I introduce a worry index that is later used as a sorting mechanism for case study selection. This is followed by a comparison of respondent worries in one high liberal (US) and one low liberal (Canada) welfare regime using interview data. Finally, using interview data I explore patterns in low-worry firms to ascertain how firms may play a role in diminishing worker concerns, and how that role may differ between high and low welfare regimes.

### ***Initial Assessment of Risk Experience of WANE Respondents: Values, Rewards, Expectations, and Worry in the Pooled Web Survey Data***

To orient the qualitative data analysis, I begin with an assessment of the web survey items related to work values, job rewards, expectations surrounding financial security, and worry using pooled data from across the WANE study countries.

The WANE web survey includes a series of work values, asking individuals how important a series of job characteristics are to them. Response categories follow a Likert-type scale where 1= Not important at all, 2= A little important, 3= Somewhat important, and 4= Very important. Three items are of particular interest for this analysis: good pay, good job security, and good fringe benefits. The survey presents these characteristics again and asks the respondents to assess how their current jobs measure up (e.g. “My job security is good” where 1=Strongly Disagree, 2 =Disagree, 3=Agree, 4=Strongly Agree) and also asks the respondents to assess statements about job satisfaction.

Table 3.3 presents the responses to these questions. While job satisfaction and evaluation of career progress was remarkably similar between the countries (all four countries had mean responses in the 3s, where 3=agree), there were significant differences by country on work values and job outcomes on all of the selected work values and job rewards variables. However, as demonstrated by the Table, these differences were relatively minor (no response category had a difference greater than 1 in mean response levels across the countries; in fact, the greatest difference, between the US and Australia on “good fringe benefits”, was about .5, still not enough to change the average response category between the countries).

Table 3.3. Work values and job outcomes among WANE web survey respondents by country

		Mean (SD)					
		Canada	Australia	UK	US	Total	
Work Values	Good pay	3.32 (.714)	3.45 (.554)	3.21 (.683)	3.50 (.588)	3.37 (.651)	**
	Good job security	3.08 (.910)	3.31 (.810)	3.43 (.679)	3.34 (.776)	3.30 (.799)	**
	Good fringe benefits	2.63 (.713)	2.37 (.677)	2.46 (.773)	2.94 (.827)	2.63 (.789)	***
Job Outcomes	Good pay	2.53 (.906)	2.47 (.880)	2.78 (.599)	2.86 (.678)	2.69 (.767)	***
	Good job security	2.55 (.961)	2.71 (.617)	2.82 (.567)	2.81 (.629)	2.73 (.709)	*
	Good fringe benefits	2.50 (.883)	2.39 (.839)	2.76 (.532)	2.92 (.665)	2.69 (.747)	***
Overall, I am satisfied with what I do in my job		3.10 (.622)	3.11 (.567)	3.06 (.647)	3.06 (.715)	3.08 (.648)	
Overall, I am satisfied with my career progress		2.84 (.673)	2.74 (.695)	2.76 (.578)	2.79 (.677)	2.79 (.651)	

\*p≤0.1 \*\*p≤0.05 \*\*\*p≤0.01 \*\*\*\*p≤0.001

Why were the differences in work values and job outcomes not greater, given the different approaches to social welfare of these countries? I used post-hoc Tukey tests to identify the specific significant differences between countries (Table 3.4). Given the nature of liberal welfare regimes, the responses concerning work values followed unsurprising patterns. In both high liberal countries, Australian and US, respondents valued good pay at levels significantly higher than the English did. With its universal health insurance and low poverty rates, Canadian respondents valued good job security at significantly lower levels than American respondents. Yet surprisingly, they also valued it at significantly lower levels than English respondents, perhaps indicating the strength of the social net as somewhat greater in Canada. American respondents, the only ones not guaranteed health insurance, valued fringe benefits at significantly higher levels than all other respondents.

Differences in job outcomes were more difficult to interpret. Assessments of current pay did not fall so clearly into a low liberal versus high liberal pattern: both English and American respondents agreed that their pay was good at their current job significantly more than Canadian and Australian respondents. Canadian respondents were less likely than English and American respondents to agree that their current job security was good. Both American and English respondents agreed that their fringe benefits were good at significantly higher levels than Canadian and Australian respondents.

The lack of remarkable country level differences in perceived outcomes may be due to differences in how greatly those outcomes were valued; in short, the base level of acceptable job outcomes one believes to be “good” may be influenced by how important one considers these outcomes to be in the first place. Yet it is also important to reiterate that these differences were so minor that the greater puzzle is not why the countries differed, but why they did not, given the different approaches to social welfare noted earlier in the chapter.

Table 3.4. Post-hoc Tukey tests for country differences in work values and job outcomes (N=425 respondents)

Dependent Variable	(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	
Job characteristics: good pay	Canada	Australia	-.142	.098	
		England	.104	.086	
		US	-.179	.085	
	Australia	Canada	.142	.098	
		England	.246*	.095	*
		US	-.037	.094	
	England	Canada	-.104	.086	
		Australia	-.246*	.095	*
		US	-.283*	.081	**
	US	Canada	.179	.085	
		Australia	.037	.094	
		England	.283*	.081	**
Job characteristics: good job security	Canada	Australia	-.234	.120	
		England	-.349*	.106	**
		US	-.264	.104	^
	Australia	Canada	.234	.120	
		England	-.115	.117	
		US	-.030	.115	
	England	Canada	.349*	.106	**
		Australia	.115	.117	
		US	.085	.100	
	US	Canada	.264	.104	^
		Australia	.030	.115	
		England	-.085	.100	
Job characteristics: good fringe benefits	Canada	Australia	.255	.116	
		England	.166	.101	
		US	-.313*	.100	**
	Australia	Canada	-.255	.116	
		England	-.089	.113	
		US	-.568*	.111	***
	England	Canada	-.166	.101	
		Australia	.089	.113	
		US	-.479*	.096	***
	US	Canada	.313*	.100	**
		Australia	.568*	.111	***
		England	.479*	.096	***
My pay is good	Canada	Australia	.060	.118	
		England	-.250	.103	^
		US	-.326*	.102	**
	Australia	Canada	-.060	.118	
		England	-.310*	.114	*
		US	-.386*	.112	**
	England	Canada	.250	.103	^
		Australia	.310*	.114	*
		US	-.076	.096	
	US	Canada	.326*	.102	**
		Australia	.386*	.112	**
		England	.076	.096	

Table 3.4. Post-hoc Tukey tests for country differences in work values and job outcomes (N=425 respondents)  
(continued)

Dependent Variable	(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	
	Australia	England	-.265*	.099	*
		US	-.421*	.098	***
		Canada	-.114	.113	
		England	-.379*	.109	**
	England	US	-.535*	.107	***
		Canada	.265*	.099	*
		Australia	.379*	.109	**
		US	-.156	.092	
	US	Canada	.421*	.098	***
		Australia	.535*	.107	***
		England	.156	.092	
My pay is good.	Canada	Australia			
		England	-.263*	.097	*
		US	-.257*	.095	*
	Australia	Canada	.162	.111	
		England	-.101	.106	
		US	-.095	.105	
	England	Canada	.263*	.097	*
		Australia	.101	.106	
		US	.006	.090	
	US	Canada	.257*	.095	*
		Australia	.095	.105	
		England	-.006	.090	

^p≤0.1 \*p≤0.05 \*\*p≤0.01 \*\*\*p≤0.001

Web survey respondents were also asked on a Likert-type scale to assess how well their income and investments satisfied their needs currently, and would continue to satisfy their needs in the future (1=Very poorly, 2=Not very well, 3=Adequately, and 4=Very well). Table 3.5 outlines the responses. While all respondents were quite similar in their assessment of the future (means of all four countries were at or near the 3 or “adequate” level), there were significant country differences in the way that current financial situations were assessed. Yet again these country differences were minor, and all countries had mean response levels somewhere in the 2 range (“Not very well”).

Table 3.5. Self-assessment of personal financial status of WANE web survey respondents by country (N=403 respondents)

		Mean (SD)				
		Canada	Australia	England	US	Total
Income and investments...	Currently satisfy needs	2.69 (.804)	2.71 (.842)	2.90 (.687)	2.98 (.680)	2.84 (.749)
	Will continue to satisfy your needs in the future	2.95 (.724)	2.94 (.745)	2.90 (.621)	3.00 (.638)	2.95 (.672)

\*p≤0.05

Table 3.6 displays the post-hoc tests for the current income and investments item. American respondents were the most optimistic, nearly reaching the 3 level (adequate), which was significantly higher than the assessments from Canadian and Australian respondents. Again, all responses were actually quite close; the difference between the “high” US mean score and the “low” Canadian mean score was a bit over one quarter of a point.

Table 3.6. Post-hoc Tukey tests for country differences in respondent assessment of personal income and investments (N=403 respondents)

Dependent Variable	(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	
Income and investments satisfy current needs...	Canada	Australia	-.019	.118	*
		England	-.206	.103	
		US	-.284*	.101	
	Australia	Canada	.019	.118	^
		England	-.187	.113	
		US	-.266	.111	
	England	Canada	.206	.103	
		Australia	.187	.113	
		US	-.078	.096	
	US	Canada	.284*	.101	*
		Australia	.266	.111	
		England	.078	.096	

^p≤0.1 \*p≤0.05

The web survey included one more variable asking respondents to assess their security. Respondents were asked if in the past five years their expectations about their future financial security had changed. There were no significant differences between countries on this measure (Table 3.7). Only about one quarter of respondents reported having lowered their expectations, while the remaining respondents reported no change or that their expectations had actually raised. Given that this data collection occurred about 4-6 years after the bursting of the IT bubble, the improving perception on the part of a third of the population is not that surprising.

Table 3.7. Expectations about financial security among WANE web survey respondents by country (N=404 respondents)

		Canada	Australia	England	US	Total
Expectations about financial security...	I have lowered my expectations	21.3%	24.6%	27.4%	25.0%	<b>24.8%</b>
	No change	39.4%	31.9%	42.7%	45.2%	<b>40.8%</b>
	I have raised my expectations	39.4%	43.5%	29.9%	29.8%	<b>34.4%</b>
Total N		94	69	117	124	<b>404</b>

As the US was the only WANE country where healthcare was not guaranteed for all citizens, I also explored healthcare coverage of US WANE respondents. All but one US respondent in the WANE sample reported that they did have health care, though the sources varied. Thirty nine percent of the sample reported that their health insurance was fully paid by their employers, and 45% reported that their health insurance was partially paid by their employers. Clearly, US respondents were quite dependent on their employers for access to health insurance. In a country where such a large portion of the population is uninsured, we are clearly looking at a privileged group of respondents.

The dependent variable in my analysis is level of worry, and to operationalize that in the web survey I have constructed an index using several worry-related items presented in the web survey. The web survey featured a ten-item “worry” series. The series asked respondents to assess how worried they were about different components of economic life and personal well-being with responses arrayed on a Likert-type scale where 1=Not at all worried, 2=Somewhat worried, 3=Quite a bit worried, and 4=Worried a great deal.<sup>22</sup> Items addressed concerns at the individual level (worry about ability to be competitive in the market should you lose your job, failing to keep your IT knowledge and skills current, your health, health of family members, juggling work and family/personal life), firm and industry level (worry about future economic success of the

<sup>22</sup> For a complete reproduction of the survey items and response categories used in this analysis, please see Appendix B.



company you work for, future of IT industry, offshoring of IT jobs to other countries), and the country and international level (state of the economy in general, international stability).

I created a worry index with the sum of these ten items, with a range of 10-40 and a Cronbach's alpha of 0.828 (I will discuss further details on the index construction below). As with the individual worry items, a lower value on the index indicates less worry and a higher value indicates greater worry. Table 3.8 outlines mean responses and standard deviations to these items by country. Three highlighted items, including worry about failing to keep IT knowledge and skills current, juggling work and family, and the state of the economy in general, emerged with country differences in ANOVA testing. There were no significant differences in the total scores on the worry index between the countries. However, there were differences on specific items. All country values clustered around the total mean index level of 21.14.

Table 3.8. Worries among WANE web survey respondents by country (N=403 respondents)

		Mean (SD)				
		Canada	Australia	England	US	Total
Worries about...	<i>Individual level</i>					
	Ability to be competitive in job market should you lose your job	2.30 (.926)	2.56 (1.042)	2.45 (1.030)	2.35 (.998)	2.40 (.999)
	<b>Failing to keep IT knowledge/skills current</b>	<b>2.04 (.915)</b>	<b>2.32 (.921)</b>	<b>2.08 (.882)</b>	<b>1.95 (.873)</b>	<b>2.07 (.899)</b>
	Your health	1.95 (.955)	2.00 (.914)	1.93 (.898)	2.02 (.941)	1.98 (.925)
	Health of family members	2.06 (1.014)	2.24 (.968)	2.07 (.962)	2.07 (.964)	2.10 (.974)
	<b>Juggling work and family</b>	<b>2.02 (.939)</b>	<b>2.43 (.939)</b>	<b>1.94 (.833)</b>	<b>2.18 (.996)</b>	<b>2.11 (.934)</b>
	<i>Organization/Industry level</i>					
	Future economic success of co. you work for	2.72 (1.010)	2.57 (1.036)	2.71 (.910)	2.65 (.939)	2.67 (.963)
	Future of IT industry	2.09 (.969)	2.06 (.938)	1.98 (.861)	1.90 (.887)	2.00 (.908)
	Offshoring of IT jobs to other countries	1.70 (.914)	1.94 (.968)	1.69 (.908)	1.85 (.952)	1.79 (.935)
	<i>Economy level</i>					
	<b>State of economy in general</b>	<b>2.15 (.867)</b>	<b>2.12 (.838)</b>	<b>2.17 (.791)</b>	<b>2.45 (.790)</b>	<b>2.24 (.826)</b>
	International stability	1.65 (.839)	1.79 (.971)	1.77 (.814)	1.90 (.863)	1.78 (.864)
	<b>Overall Worry Index (10 items, range 10-40, <math>\alpha=.828</math>)</b>	<b>20.68 (5.87)</b>	<b>22.03 (6.55)</b>	<b>20.78 (5.36)</b>	<b>21.33 (5.70)</b>	<b>21.14 (5.79)</b>

^p≤0.1 \*p≤0.05 \*\*p≤0.01 \*\*\*p≤0.001

To assess the specific nature of these differences, I conducted post-hoc Tukey tests (Table 3.9). The differences in concern about maintaining current IT knowledge and skills was significant between Australia and the US, where American respondents were the least concerned and Australian respondents were the most concerned. Australian respondents were also significantly more concerned about juggling work and family than their counterparts in Canada and England. Finally, the state of the economy was significantly more worrisome for American

respondents than respondents from all three other countries. Yet again, these differences were so minor as to be unremarkable; the greatest between-countries difference in mean responses was around .5, and most were much closer in range.

Table 3.9. Post-hoc Tukey tests for country differences in worry scale items (N=403 respondents)†

Dependent Variable	(I) Region	(J) Region	Mean Difference (I-J)	Std. Error
Worry about: failing to keep your IT knowledge and skills current	Canada	Australia	-.281	.142
		England	-.034	.124
		US	.091	.122
	Australia	Canada	.281	.142
		England	.247	.136
		US	.372*	.135*
	England	Canada	.034	.124
		Australia	-.247	.136
		US	.125	.115
	US	Canada	-.091	.122
		Australia	-.372*	.135*
		England	-.125	.115
Worry about: state of the economy in general	Canada	Australia	.031	.130
		England	-.022	.113
		US	-.303*	.112*
	Australia	Canada	-.031	.130
		England	-.053	.125
		US	-.334*	.123*
	England	Canada	.022	.113
		Australia	.053	.125
		US	-.281*	.105*
	US	Canada	.303*	.112*
		Australia	.334*	.123*
		England	.281*	.105*
Worry about: juggling work and family/personal life	Canada	Australia	-.405*	.147*
		England	.081	.128
		US	-.156	.126
	Australia	Canada	.405*	.147*
		England	.486*	.141**
		US	.249	.139
	England	Canada	-.081	.128
		Australia	-.486*	.141**
		US	-.237	.119
	US	Canada	.156	.126
		Australia	-.249	.139
		England	.237	.119

\*p≤0.05 \*\*p≤0.01

†Only variables with significant country differences are shown. Seven other variables without significant country differences are omitted (for a complete list of the variables, see Table 3.8).

As mentioned above, the 10-item worry scale had a Cronbach's alpha of 0.828, indicating internal consistency between the items. To further investigate whether the index was unidimensional, I created a correlation matrix with the 10 items (Table 3.10). All p-values were significant, indicating that the items are all correlated. All r-values were positive, indicating a positive relationship between each item. Items in parenthesis had an r-value higher than 0.5, indicating a moderate correlation.

Table 3.10. Correlation matrix for worry index items (N=404 respondents)										
Worry about...	future economic success of the company you work for	future of IT industry	offshoring of IT jobs to other countries	ability to be competitive in the job market should you lose your job	failing to keep your IT knowledge and skills current	state of the economy in general	your health	health of family members	juggling work and family/personal life	international stability
future economic success of the company you work for										
future of IT industry	.416**									
offshoring of IT jobs to other countries	.254**	(.631)**								
ability to be competitive in the job market should you lose your job	.361**	.413**	.414**							
failing to keep your IT knowledge and skills current	.274**	.415**	.402**	(.569)**						
state of the economy in general	.344**	.430**	.413**	.350**	.303**					
your health	.151**	.231**	.150**	.287**	.270**	.450**				
health of family members	.157**	.229**	.129**	.283**	.257**	.315**	(.719)**			
juggling work and family/personal life	.143**	.177**	.169**	.264**	.338**	.248**	.401**	.484**		
international stability	.182**	.326**	.327**	.271**	.269**	(.544)**	.467**	.442**	.249**	

\*\*p≤0.01

There were significant positive correlations of moderate strength for offshoring and the future of the IT industry ( $r=.631$ ), failing to keep skills current and the ability to be competitive in the job market if you lost your job ( $r=.569$ ), health of family and your health ( $r=.719$ ), and international stability and the state of the economy ( $r=.544$ ). I checked the Cronbach's alphas of the scale if these items were deleted (see Table 3.11). The removal of any of these items would not improve the overall alpha of 0.828; nor would the removal of any item make the scale unreliable (all alphas for item deletion are over 0.8).

Table 3.11. Cronbach's Alpha if deleted for individual items in 10-item worry index. N=402 respondents

Worry item	$\alpha$ if Item Deleted
Future economic success of the company you work for	.825
Future of IT industry	.806
Offshoring of IT jobs to other countries	.813
Your ability to be competitive in the job market should you lose your job	.809
Failing to keep your IT knowledge and skills current	.810
State of the economy in general	.807
Your health	.811
Health of family members	.813
Juggling work and family/personal life	.822
International stability	.812
<b>Total index of all worry items</b>	<b>.828</b>

To determine if it would make sense to remove groupings of variables from the overall index, I constructed three sub-indices of the worry index (Table 3.12), based on the levels of concern represented by each variable: individual ( $\alpha=0.748$ , five items including: ability to be competitive in the job market should you lose your job, failing to keep IT knowledge/skills current, your health, health of family members, and juggling work and family), industry ( $\alpha=0.774$ , 2 items including: future of IT industry, offshoring of IT jobs to other countries), and economy ( $\alpha=0.690$ , 2 items including: state of economy in general, international stability).

Table 3.12. Worry sub-indices for web survey respondents by country. N=402 respondents.

Subscale	Worry index alpha if subscale deleted	Mean (std. dev.)				
		Canada	Australia	UK	US	Total
Individual Worries Index (5 items, $\alpha=.759$ )	0.764	10.37 (3.243)	11.54 (3.487)	10.47 (3.199)	10.58 (3.424)	10.66 (3.341) *
Industry worries† (2 items, $\alpha=.773$ )	0.793	3.79 (1.734)	4.00 (1.782)	3.66 (1.520)	3.76 (1.679)	3.78 (1.664)
Economy Worries Index (2 items, $\alpha=.704$ )	0.789	3.80 (1.478)	3.91 (1.552)	3.94 (1.404)	4.35 (1.471)	4.02 (1.478) *

\* $p \leq 0.05$

†In addition to the 2-item industry worries index, I ran one version that included three items (the addition was worry about future success of one's own company). This yielded an alpha of 0.690, so I reduced it to the two items that were more reliably connected.

In ANOVA testing, both the individual-level worries index and the economy-level worries index had significant country differences, though these differences were quite minor. Post-hoc Tukey tests (Table 3.13) revealed that Australia had significant differences with both Canada and England in the individual-level worries index ( $p < .1$  for both), with Australia having the highest mean of individual-level worries internationally. The only significant country difference to emerge for the economy-level worries index was that between Canada and the US

( $p < .05$ ), where Canada had the lowest mean economic-level worries between the countries, and the US had the highest.

Table 3.13. Post-hoc Tukey tests for country differences in worry index subscales.

Worry subscale	(I) Region	(J) Region	Mean Difference (I-J)	Std. Error	Sig.
Individual worries index	Canada	Australia	-1.36679	.53763	^
		UK	-.09775	.46974	
		US	-.20830	.46380	
	Australia	Canada	1.36679	.53763	^
		UK	1.26904	.51477	^
		US	1.15849	.50936	
	UK	Canada	.09775	.46974	
		Australia	-1.26904	.51477	^
		US	-.11056	.43710	
	US	Canada	.20830	.46380	
		Australia	-1.15849	.50936	
		UK	.11056	.43710	
Economy worries index	Canada	Australia	-.20213	.23724	
		UK	-.14230	.20728	
		US	-.54890 <sup>+</sup>	.20466	*
	Australia	Canada	.20213	.23724	
		UK	.05983	.22715	
		US	-.34677	.22476	
	UK	Canada	.14230	.20728	
		Australia	-.05983	.22715	
		US	-.40660	.19288	
	US	Canada	.54890 <sup>+</sup>	.20466	*
		Australia	.34677	.22476	
		UK	.40660	.19288	

^ $p \leq 0.1$  \* $p \leq 0.05$

None of these sub-indices had better explanatory power than the overall worries index, so I continued my analysis based on the overall worry index.

I arrayed the average of respondent scores on the general worry index by firm, from low to high scores (range 14.7-21.1, median = 21). Table 3.14 describes the distribution of all firms by country around the median level of worry. US and Canadian firms are split fairly evenly between low worried and high worried, with Canadian firms having a somewhat larger not-worried presence, while the UK has twice as many low worry firms as it has high worry firms, and vice versa for Australia. If worry is correlated with generosity of welfare regime, this is in keeping with the conceptualization of the US and Canada as the middle cases on the liberal

welfare spectrum, with Australia and the US exemplifying high liberal countries and the UK and Canada exemplifying low.

Table 3.14. Distribution of firms around median worry index score, by country

Welfare Regime		N Firms under median worry index score	N Firms at median worry index score	N Firms over median worry index score
High Liberal	Australia	3	1	7 of 11
	US	6	0	5 of 11
Low Liberal	Canada	10	1	7 of 18
	UK	4	1	2 of 7

### Summary of Web Survey Findings for Pooled Data

Taken as a whole, these survey items paint a picture of how the web survey respondents viewed their financial situation, in terms of financial-related work values and outcomes, assessments of income and investments, and expectations about financial security.

The low liberal states, Canada and the UK, had some of the lowest scores on the importance of work values. English respondents are the least concerned about good pay, and some of the most likely to think the pay they receive is good. Canadian respondents were the least likely to report having good job security, but also the least likely to describe job security as important.

There were several concerns among respondents in the high liberal states of Australia and the US. Australian respondents were the most worried about keeping their skills current and juggling work and family life, and the US respondents were the most worried about the general state of the economy. US respondents appear to be generally the most optimistic in the group on several fronts, and also some of the most demanding. They are some of the most likely to think the pay they receive is good, even if their valuation of good pay is comparable to Canadian and Australian respondents, and also had the sunniest outlook about their current income and investments. They also have some of the highest valuation and outcomes for job security and by

far the highest valuation and outcomes for good fringe benefits. They were quite secure about keeping their IT skills current.

The majority of respondents in all countries have either not changed their expectations about financial security in the last five years, or even raised their expectations, perhaps unsurprising as the survey was taken about five years after the IT bubble burst, though American respondents were concerned about the state of the economy in general (quite prescient given the economic collapse that hit a few years later).

Yet it is striking to note that overall, these workers – situated in a high risk industry, in the high risk new economy, in liberal social welfare regimes – are not terribly worried. The worry index goes from 10 to 40, with higher scores indicating greater worry. The average score for the sample is 21.14, a low score, and there are no significant differences on the overall worry index between countries. Why are these workers so unconcerned? Additionally, the country differences on most measures were so minor as to be unremarkable. Given the differences in safety nets between the countries, it was surprising to see US and Australian respondents report similar work values, job rewards, and worries as their Canadian and UK counterparts. Shouldn't the high liberal firms especially demonstrate a greater level of worry? To examine whether there was a difference in how risk was experienced in different welfare regimes, and if firms could play a role in alleviating risk worry, I turn to the qualitative data.

### ***Risk and the Social Welfare Context: Comparing the US and Canada***

There were no significant differences between the countries on the worry index, and differences between countries in the work values and job outcomes were unremarkable. Was there more to the worry story? Was the country context impacting how individuals assessed worry? To answer this question, I compare interview data between the two closest countries,

which share a border and have similar cultures, but quite different approaches to welfare policy: Canada and the US.

In the following analysis, as US workers expressed feelings of insecurity much more commonly than Canadian respondents, I use the US as a baseline for comparison and therefore quotes, unless otherwise noted, are from US workers. I have organized these results into two categories: the concerns expressed by workers about their own health care and retirement, and the concerns expressed by managers and owners about the provision of health care and retirement.

### **Worker Concerns about Health Care and Retirement**

Put broadly, I found that while Canadian respondents were concerned about supplemental health benefits, US respondents were more concerned than their Canadian counterparts about maintaining health benefits. Workers in both countries were not highly confident in their retirement plans, though as a young population, these concerns were less salient than health care. I describe these findings in detail below.

In a social welfare environment where the supply of health insurance is left to individuals and employers, it was clear that health care was paramount in the minds of many of the US workers, who were more likely to report that benefits were keeping them in their jobs. As a young population of workers it may be unsurprising that health insurance a more pressing issue than retirement for most workers, and the benefit that received the majority of attention. A strong health insurance plan was often appeared on lists of reasons why a job was good, and for others it could be the only reason to maintain an employment relationship even if the rest of the job rewards were less satisfying. Health care benefits could be urgent issues for older workers as well. One respondent, an older worker who was putting off retirement for the benefits, described the paramount importance of a strong benefits package, noting, “I have positioned myself to where I could work for half of my salary and still put money in the bank. So I didn’t care about



the money. I care about the insurance. `Cause that equates to a lot more money under the wrong circumstances. So I'd almost work for free now...."

Another respondent speculated that some older workers were in jobs they did not necessarily want for similar reasons, staying with larger firms "...like an IBM or a Nortel where they are trying to hang on and get the really good retirement benefits."

There was plenty to recommend larger firms, benefits-wise. One respondent who had previously worked for IBM described what he perceived to be the illusory nature of security at larger firms, but noted the benefits were much better:

Security-wise, there could be differences too. You know, at, at IBM I'm not sure you're much more secure than you are at a place like this but you have sort of a what I'll say is a false sense of security. So you have a sense that you're secure, you're probably not.... Some of the benefit stuff you feel a little more exposed here than I did at IBM, which have more of a fuller, more of a sense of taking care of you from a benefits point of view. While the respondent was acknowledging that even employment with larger firms can be prone to disruption, risk was diminished by the benefits plans; small firm benefits left one vulnerable, "exposed".

Compared to US health benefits, Canada's state health benefits are far more universal and generous. Still, many companies offered health coverage which supplemented the state plans, and several companies offered dental, disability, and vision plans despite their small firm size. Discussions of benefits package shortcomings in Canada were about these supplemental plans, and therefore absent the urgency that US respondents expressed about health insurance.

Though good health benefits seemed central to respondents of all levels and were often addressed by the companies in both countries in one way or another, retirement benefits were offered less frequently by the companies. Many planned to offer them at some future time but claimed that they were financially unable to offer it at the time of interview. Retirement planning may have seemed less relevant to such a young workforce, but it was something that many

respondents in both countries noted as problematic at their companies. The importance of solid retirement benefits was highlighted by participants who reported the difficulty in taking on retirement investing on their own, as exemplified by one US respondent:

It's definitely easier to do I think if you got it set up and it comes out of your paycheck. And, also for the companies that will like match certain amounts, you know, then that's a real encouragement to add extra amounts. And, I did that while I was at the other company, so to be honest right now, I'm really not. I haven't really continued my retirement savings. I'm kind of waiting.

On both sides of the border, some respondents were able to make private investments and plans, but many had similar experiences to the above respondent. With such a young workforce, sometimes retirement did not register as a concern; other times, there was not enough extra personal money to invest or the process seemed remote.

The difficulty workers experienced in taking care of their own retirements becomes more problematic in the US where the government is not as reliable as a backup plan, and companies are not necessarily committed to helping employees either. Experiences with companies who were perceived to have taken advantage of people's commitment and cut them loose before owing full retirement benefits were mentioned, most vividly by one respondent whose husband had lost his job as he drew near retirement. She noted:

I think business today, especially big business, is just interested in the bottom line... And I think that there's a growing trend to get rid of the older workers, and that cuts down on the bottom line. My husband just lost his job.... He was told in September that his job would go away in December. And it did. And he was a year and 2 months away from full retirement.

Examples like these contributed to a perception among some US respondents that businesses were solely out to make a profit, and workers were in a position of disadvantage.

One former employee of a larger US firm highlighted the feelings of insecurity that can prevail in larger firms as well, describing a scene from his former firm that demonstrated the cold way that larger firms can execute layoffs:

Oh, I witnessed horrible layoffs where they, you know, they just told you the night before, “OK, we’re going to do your hall tomorrow at 9, you’ll need to be here in your office by 9 tomorrow morning.” You know? Well how do you sleep, how do you sleep that night, right? And then you come and everyone’s sort of milling around in the hallway talking, 8:45 to 9 and then you go, “well it’s 9 o’clock” so everyone would kind of go sit in their office and then all of a sudden the HR person [makes whooshing noise] comes down the hall, takes somebody out, comes down the hall, takes somebody out, comes back says “OK, we’re done with your hall.” And then the survivors go out and kind of look at each other, you know, it’s just like, brutal. So yea, so I mean that’s always on my mind...

These stories of company commitment (or, specifically, the lack thereof) were part of a larger landscape of anecdotes about workers left in a lurch when it came time for retirement. Cautionary tales abound in the US firms, though not so prominently in Canadian firms, and inspired anxiety in the workers who told them. As one respondent put it, “...I’d like to make the retirement without having to you know, be a greeter at Wal-Mart.”

While there were some first-person stories of layoffs and retirement woes, as in our respondent above whose husband was laid off within inches of a full retirement, there were other stories of people who witness difficult events or knew someone who had gone through adversity in their benefits. Horror stories were more common among US participants, and often more dire. These were not tales of direct personal disadvantage, but the lessons of instability nonetheless had an impact on the participants. One participant had changed majors in school in response to a co-worker he met while working a summer internship. He related the tale:

Well, in school I, uh, I originally went to school for, uh, to be a lawyer...And then my first semester at NC State, I decided to do an intern at Disney...I met a guy that, he had worked in the corporate sector, he, he had the six figure job, the, the black suit, white tie, white shirt, everything. And in order to keep his pension, he had to stock shelves at, at the park because he was released because he was getting old....He was happy that he didn’t have the stressful job of, you know, having to go work, work forty to sixty hours a week. But then again, he had to stock shelves to keep his, to keep his monthly income stable.

Another respondent worried over a father who had demonstrated tremendous commitment to his company throughout his working life, only to find himself out of luck in retirement:

My father worked for the same company for 35 years. Five years after he retired, he had retired at the age of 70, that company went [bankrupt], got bought by [another] company.

His pension was in the bankruptcy, had nothing. Yeah, so you know my dad's 83 and my mom's seventy-something.... And, I mean, gosh, their meds alone they spend \$1000 a month. You know on the things that keep them alive. And living off whatever 401Ks or IRAs that they were able to – you know, my dad said he never thought he'd ever live this long. Been retired 13 years.... I mean, you know it's – I mean do we – will our baby-boomer generation go into poverty?

This anecdote illustrated the particular predicament US workers found themselves in; the parents in this story were doubly harmed as they were so fully dependent on the firm for their welfare and as the nature of their health care was so expensive. The concern the respondent felt about the future prospects of the baby boom generation reflects a general sense of decline in the employer/employee relationship echoed by others. If current retirees, who came of age in an era of greater employer and government commitment to retirement, cannot make it, what hope is there for younger generations? While neither of these accounts of retirement woes was in the first-person, the concerns were real for the respondents who related them. Horror stories like these contributed to a general anxiety about retirement among US respondents and a sense that no one was looking out for retirees.

Canadian workers shared fewer horror stories, but were nonetheless similarly pessimistic about retirement. Many interview respondents reported that they had no pension plans, although a few companies did offer tax-sheltered Registered Retirement Savings Plans (RRSPs) with matching funds, which are akin to the US 401K plans. Some demonstrated distrust for the state plans that mirrored the distrust some US respondents have for Social Security. One stated, “And I'm not, and I don't really trust the government that they're going to be there with all of the money I put into the Canada Pension Plan [laughs].”

Some Canadian respondents were less fatalistic about the need to continue working in their later years, but were taking personal action to ensure that they would be able to exit the labor force. Noting the rarity of pensions in private companies and the prevalence of RRSPs that employers did not contribute much to, one respondent stated, “...you pretty much are on your

own as far as your retirement. So you do...put your own money away and you...do your own... decision-making in terms of...asset mixes and so forth...” Some respondents had invested in plans privately, and some had other forms of investment (such as real estate or their own companies) to cover their expenses.

One Canadian worker had previously lived in the US and noted the differences in the centrality of benefits:

So for an organization our size we have phenomenally good benefits. ...I don't put much stock in them 'cause um, living in the States, the benefits were so much more important, I tend to think of benefits here in Canada as a little bit of a Mickey Mouse thing but at the end of the day, you know, dental – all you have to do is have a couple of kids go to the dentist and you realize why the benefits are good for that too...

As demonstrated by this respondent, having a basic level of health insurance covered by the state freed Canadians to worry about how to cover other health issues such as dental or vision, which was less often discussed among US respondents.

### **Business Perspectives about Health Care and Retirement**

In broad terms, business owners and managers in both the US and Canada were concerned about the expense of providing benefits to their workforce. However, these concerns were more pressing in the US.

Business owners and managers offered a different perspective on the strains placed on the employment relationship by such corporatist versus public welfare schemes. As small firms, personnel expenses were often a very large portion of the operating budgets, and benefits were costly. One US respondent estimated that “with a software company, 80% of your expense is salary and benefits.” These high costs were not stable across employees either, so employees with different situations or who had sick family members could be particularly expensive to the firm, as one US employer noted:

Lifestyle companies, we do um, we pay 100% health insurance. Our company does. For employees and their families. Now it's expensive for us. Because, to have several twenty year olds that are married... And again this, not trying to sound discriminatory or anything, but a woman in birthing age and you look at their health insurance premium – it is astronomical.... We've been in business for three years and for three years in a row the health insurance company has increase our premiums by 33%. Which is not uncommon. It's been going on since 9/11. The insurance companies have been allowed to replenish the, replenish their reserves by having these huge, huge leaps...

The differences between health statuses of employees were very expensive to employers in the US, but in Canada they were in part addressed by the state. Given the expense of healthcare and pension plans, small company size and young company age were challenging to organizations seeking to offer benefits in both countries, as plans were expensive. One Canadian manager noted that this affected the firms' hiring policies:

Well, and that's always a problem when you're a small company is providing those benefits. And that's why everyone's a contractor so they don't get them.

Essentially, even if employers offered plans, they could keep costs low by keeping workers off the plans, which was accomplished by keeping them in the purgatory of temporary or contract work. In companies with small margins, this could be one way to keep the business afloat.

### **Summary of Findings for Social Welfare Comparison in Worry**

Workers in both the US and Canada were concerned with health and retirement pensions; health was a primary concern that was followed by retirement. However, Canadian workers were likely similarly satisfied to US workers in the quantitative data, and less anxious, as many of their most basic needs were already met by state plans. In essence, benefits appear to follow something of a needs hierarchy; once basic health is covered, workers can concentrate on secondary health benefits such as vision, dental, and prescription coverage, and also on retirement benefits.

Workers in both countries who had health care could worry about retirement plans, and those who had both could worry about secondary health. The order of benefits concerns after basic health care was not always clear and is likely in part connected to one's location in the life course; a worker with teenage children might worry more about dental coverage while a worker with

grown children might worry about the retirement nest egg. Owners and managers in both countries describe the high costs of providing benefits to workers, though Canadian owners discussed this in the context of supplemental policies and lengthy paid leaves, which were extensions of state provisions rather than primary provisions for their employees. Some US respondents describe the differences that demographics can make in how expensive a benefits package is.

As noted previously, given the differences in national welfare policies and some significant country differences in attitudes and work outcomes, it is somewhat surprising to see that the overall worry index is comparable across all four nations. As I have noted in my discussion of US and Canadian differences, there are some qualitative differences in *how* that worry manifests between different welfare regimes; the high-liberal US system yielding greater concerns about basic retirement and healthcare provision, while the low-liberal Canadian system yields greater concerns about details – dental, vision, private pension, etc. Clearly the experience of worry is qualitatively different by welfare regime. But could it also be different based on the employing firm? Given the high levels of private programs in Australia and the US, the states which should have the most worried respondents, perhaps the firms themselves are doing things to mitigate worry.

In the previous sections I have outlined some of the security and worry differences at the country level, working in the framework of high and low liberal regimes. To investigate the specific firm practices and characteristics that might have an intervening effect, I turn to the second level of analysis: the firm level.

### ***Risk and the Firm***

As all liberal regimes, as described by Esping-Andersen, allow individual lifestyle to remain tied to the market with little intervention, we might expect workers in these regimes to be

quite concerned about their work and security. Yet the worry index shows not only that the different levels of welfare state are not greatly impacting country differences in concern, but that generally the respondents only demonstrate modest levels of concern (mean worry levels range in the 20-22 area on a index with a 10-40 range). To answer the questions I posed at the outset, ‘Can firms moderate the anxieties of their workers that are caused by their nations’ welfare regimes? What firm characteristics or human resource practices can allay fears?’, I will focus the case study analysis on firms with the least worried participants. I select the least worried firms as employees of these firms offer the greatest contrast to what we might expect worry levels to be, given the high risk burden borne by individuals in this industry and in these liberal welfare states. This seems to indicate that perhaps risk protection for these workers is being offered at the firm level. I want to see what firms are doing to help minimize worry, or help shoulder the burden of risk on individuals. To select cases for further in-depth analysis, I arrayed the firms by mean levels of individual responses on the worry index. After excluding cases with fewer than three web respondents, I selected two cases from each country that were the lowest on the worry index. Selected cases are highlighted in Table 3.15. I have added a country identifier to the beginning of each firm ID for clarity.

	Location	Case ID	Firm size (N employees)	Interview respondents	Web survey respondents
High Liberal	Australia	AUS 204	16	10	6
		AUS 210	22	5	6
	US	US 509	6	4	4
		US 512	41	6	17
Low Liberal	Canada	CAN 107	11	11	8
		CAN 112	14	10	7
	UK	UK 405	115 <sup>23</sup>	17	31
		UK 403	25	9	11

No universal set of criteria emerged from the qualitative analysis that was present in each and every non-worried company. Rather, several factors emerged that were duplicated throughout

<sup>23</sup> In this large case the study team sampled exclusively from the engineering department; while the firm as a whole consisted of 115 employees at this site, the study was targeted to a pool of 41 employees.



these firms, with each firm possessing a few of these characteristics. There were factors related to firm structure, firm history, and the life experiences of those who occupied the firms. I shall discuss each in turn.

### **Firm Structures**

Surprisingly, there was no clear relationship between pay and worry in the qualitative discussions surrounding risk.<sup>24</sup> Respondents' assessments of pay varied throughout the interviews in these low worry firms. In some firms, interview respondents predominantly described the pay as low (US 509, AUS 204 and AUS 210, and CAN 112), while others felt the pay was reasonable but were not overwhelmed by it (UK 403, UK 405). Interview respondents at a couple of firms reported that they were paid quite well (US 512, CAN 107). In most of the low- or middling pay firms, respondents described themselves or their co-workers as "not in it for the money."

Benefits, on the other hand, were a considerable issue for respondents. This was especially true in the US 509, a firm where pay was a definite sore spot among employees. One employee described the pay as "lower than the low end of average," and others noted that even for the region (which has a notably low cost of living), the salaries were mediocre. Yet, the owner paid full health insurance for all of his employees and their families, leaving the employees to pay only their deductibles. CAN 112 also paid in full for supplemental insurance for its employees. In this case it appeared expansive benefits were enough to make up for poor pay, and employees described the benefits as quite good.

On the other hand, in keeping with the results in the previous section, benefits in the Canadian companies were sometimes described as lacking for the absence of more minor

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<sup>24</sup> I attempted to examine the pay issue through quantitative data as well (survey respondents were asked to identify their individual and household incomes). However, all firms did not have strong response rates, so it was impossible to tell if some firms were "low" or "high" payers, or if there was a selection effect in who chose to take the web survey.

supplementary plans. In CAN 112, a company with a very extensive benefits package, many employees complained that there was no vision coverage. In CAN 107, one woman complained that they only adhered to the minimum maternity plans (she had taken almost six months off for the birth of her child). While these complaints may be quite normal for a system with a more expansive safety net, employers in the US might find them quite shocking indeed.

The role of ownership or management was also notable in several firms, particularly in high liberal cases. Energetic or high commitment owners were remarkable in the sample. In AUS 204, the owner described the goal of staff recruitment: “When I take someone, I’m picking them. I really am trying to pick them for life. I’d love that in ten years’ time all these guys were still here.” One respondent in US 509 described a situation where he needed a pay advance because he had no money right after he was hired, which the owner issued on the spot. Owner commitment was also particularly high in CAN 107, where one respondent described the efforts of the owner to keep the team together:

...working for [the owner], like he has proven that he is as loyal to us as we are to him. So, given some hard times, he should have laid people off but he didn’t. So there is that level of stability, but you see the contractors pretty well have it too, to some degree.

These owners demonstrated a commitment to their employees that was quite strong, and this may in part help ease worries about stability among their staffs.

Another characteristic of many of these firms was strong communication of firm goals, values, and events. This was often the case in firms where business or finance-type personalities were prominent in the company (US 512, UK 405, and CAN 112), though not exclusively so. Both AUS 204 and US 512 held regular, all-hands meetings to discuss the state of the company, where it was going, and how everyone fit into that. In US 512, there was a strong push from the CEO to make sure that all products had market applications, as described by the CEO:

So I focus on those three, you know, checker-like moves of ‘Are we building enough product fast enough? Are we selling product fast enough? And are we properly accounting for what, you know, we did?’...I make sure that the product is flowing, but I spend more time making sure I understand what customers want, uh, when they want it, what they will buy, uh, and then making sure our development is focused in that direction.

The importance of remaining mindful of market applications (rather than building something because you can) was reiterated by the owner of CAN 112, who mentioned that “one of the problems that these developers have is they develop stuff that they like...The successful companies will probably have had somebody that’s had their feet on the street and, and know what the market is looking for.” (91). Employees in several firms were able to articulate a consistent company vision, indicating that firm values were being expressed in a consistent manner (US 512, UK 405, CAN 107, and CAN 112).

### **Firm History**

Charismatic leadership was not the only way owners seemed to influence stability. A history of failure was a theme in several firms, particularly the high liberal firms AUS 204, whose owners had histories of failure, as did those of US 512. It is perhaps unsurprising that these firms also had a high tolerance for mistakes. As noted by the US 512 CEO, “We also sort of believe in a culture that being wrong is okay. If you don’t do something, that’s not okay. Yeah, you lose your job when you don’t do something. Yeah, you don’t lose your job if you make a mistake.” The tolerance for mistakes meant that the employment relationship was more likely to be preserved, a major selling point in systems where individual well-being is so strongly tied to that relationship.

Some of the low liberal firms were in recovery mode following layoff cycles or downturns, in particular UK 405 and UK 403, and CAN 107. This may give the remaining incumbents a sense of stability as they survived the layoff cycles, and the cutbacks were seen as

time-limited affairs and not necessarily indicative of a company in a spiral. A leader in UK 405 described it thusly:

...we were too big.... And if you also get in a situation where people feel as though there's a lot of dead weight around because there's not enough work to go around and there are people who are going to work really hard and other people who will gravitate to working less hard. So it actually refreshes the whole organization, if the whole organization understands why you do it. It's a disaster of course if you just do it for the wrong reasons.

Again, communication was key; layoffs without a clear organizational objective and explanation were dangerous, but those that served to cut "dead weight" and were explained as such were actually quite helpful.

While recovery was nice, growth was even better. Several companies were described as actively growing, or having a great deal of growth potential, which was pleasing to employees there (AUS 204, UK 403, UK 405, and US 512). Yet in low liberal firms, a cautious approach to growth dominated among these low worry firms. All four low liberal/low worry firms made efforts to control growth, cautious about getting too big lest they become too difficult to manage or unstable. Two low liberal firms in particular were quite careful to make sure that they always had money in the bank, rather than spending too much on development (CAN 112, and UK 405). UK 405 had actually returned money to investors during a downturn after a surprisingly successful initial public offering; they reasoned that they had more than they needed and could not justify spending the remaining money.

Finally, growth was not the only way a company signaled viability; another was to operate in a stable niche. US cases US 509 and US 512, UK's UK 405, and Canada's CAN 112 all occupied specialized markets where they had either a regional, national, or even international dominance. Some worked for larger companies, the prime example being UK 405's contract work for Microsoft, which garnered the company a Microsoft award. Several products UK 405

sold were actually legally mandated for use by governments, lending further stability to their work. UK 403 found another way to garner a steady income stream: annual maintenance contracts, where they were basically on retainer to maintain their products for their customers, though they rarely needed to perform this work.

### **Summary of Findings for Firm-Level Analysis**

There was no clear relationship between pay and worry but there was one between benefits and worry, which was most urgent in the US, the most employer-dependent country for health benefits. Across the board, firms could create a sense of stability through a strong communication of firm goals, values, and events, a period of growth, or placement in a niche market with little competition.

In all four low liberal firms, growth was controlled, careful, and two firms in particular placed an emphasis on always having money in the bank. A few of the low liberal firms had survived recent layoffs cycles, but this may have enhanced the sense among employees that the owners were cautious and controlled in their approach as the goals of the layoffs were clearly communicated (and, importantly, everyone who was left to answer our survey had missed the chopping block).

In high liberal firms, the role of the owners in instilling stability was somewhat more pronounced; several firms had energetic or high commitment owners who were loyal to their employees and committed to maintaining the employment relationship. Owners who had a history of failure but emphasized the acceptance of mistakes were also important, meaning that the employment relationship would not be sacrificed for employee missteps.

### **INTEGRATED DISCUSSION OF ANALYSES**

At first blush it appeared that welfare regimes had little effect on worries as there were no statistically significant differences in the general worry index between countries, and work values

and job outcomes were quite similar despite differences in the countries' approaches to social welfare. Across the board, most respondents reported that their expectations about future financial security had remained the same or improved in the past five years. However, a closer examination of interview data revealed that several aspects of the worry experience were in fact quite different.

While statistically appearing to feel about as secure as their low liberal counterparts, the US workers actually had several qualitative differences in their experience of stability, relative to their low liberal counterparts. The premium placed on health benefits led some to maintain employment connections that were otherwise unsatisfactory, and familiarity with horror stories about workers on the losing side of risk were quite salient to their interpretation of risk. In high liberal firms, the role of the owners in instilling stability was somewhat more pronounced, with owner charisma and commitment lending an extra level of assurance that the employment relationship would be maintained even in the face of economic adversity or employee mistakes.

To clarify how firms might mediate the risk experience I examined qualitative interview data among firms with the lowest mean worry scores in each country, and found that in general the risk experience in low liberal firms was quite different than that in high liberal firms. Employee concerns were often about more supplementary plans such as prescriptions, dental, or vision, and supplementary retirement investments. Yet it also took a great deal more stability to impress them; while the high liberal firms were marked by assurances that the employee would not be terminated easily, low liberal firms were marked by more extreme stability: cautious growth and a great deal of money in the bank.

Across the board, firms could create a sense of stability through a strong communication of firm goals, values, and events, a period of growth, or placement in a niche market with little competition.

### *Limitations*

The findings of this study are limited to workers in small and medium IT businesses, who may already have a higher tolerance for risk than their large firm or non-IT counterparts. While many respondents had histories of working with larger firms, direct comparisons of workers who opt for ‘safer’ industries and those who opt for these risky enterprises might offer additional insight to the nature of risk. However, given that the current analysis focuses on workers who by all logic *should* feel a great deal of risk (high risk work, and particularly those in high liberal regimes) yet do not, the gap between potential exposure to risk and actual perceived risk is quite great and offers many lessons for those seeking to mitigate risk for workers.

Additionally, IT workers may be insulated from risk due to their placement in society. IT is a white collar job that would earn respondents in all four study countries a livable income, and the workers generally have good pay and benefits (even in the US nearly all of the respondents had health insurance – a major sign of economic advantage in a nation with so many uninsured). However, this implies that the greatest risk to IT employees is work disruption, which could cut these ties that provide such stability. A study of low income workers who do not receive such strong pay and benefits and are therefore subject to even greater individual risk *even when employed* would likely show even stronger differences between welfare regimes.

### **CONCLUSION**

Information technology operates in an area that has always been familiar to low wage workers, but is becoming increasingly familiar to white collar workers as well: the area of precarious work, characterized by uncertainty and risk (Kalleberg 2009). However, unlike their low wage counterparts, IT workers have greater potential for shelter from this risk in the employment relationship, as many of their employers confer health insurance and pension benefits that remove risk from the individual himself throughout the employment relationship. As

most jobs are currently on a path towards increasing precariousness, the experience of IT workers already subjected to a greater degree of risk is instructive.

Attempts to categorize welfare regimes based on Esping-Andersen's welfare classifications do miss some important within-category differences. This may be due to original imprecision, as suggested by some critics, or atrophy over time; even the most perfect policy categorizations will lose some power after two decades. For current research, the important takeaway message is that efforts to use Esping-Andersen as a sorting mechanism should be undertaken with caution, and a careful examination of the policies of interest in each member country. I have demonstrated one use of an adapted Esping-Andersen model. Highlighting some important differences in policy orientation related to healthcare and pension provision, I theorized that within the liberal category, two subcategories would improve theoretical precision: high liberal, to represent nations that leave individual welfare almost entirely tied to market performance, and low liberal, to represent nations that offer a broader safety net.

The differences that emerged in analysis were related to differences in the extent of liberalization in the nation. Focusing on worry as a manifestation of perceived risk at the individual level, I found that US workers were under the greatest pressure to maintain employment relations, and Australians were also quite pressured on this front. Given the dependence on the employer for well-being, it is unsurprising that the least worried workforces were in firms where employers demonstrated high commitment to the employees and tolerated mistakes. In the low liberal nations of Australia and the UK, workers generally had lower valuation of work values and job rewards, perhaps due to their lesser dependence on good pay, job security, and fringe benefits for their wellbeing. However, the workforces of the least worried firms in these samples required more than a promise that they wouldn't be made redundant or fired; rather, they were in firms that were extra-stable, some with extra large cash reserves, or very cautious growth plans.



While workers in the US, the high liberal nation with one of the highest senior poverty rates in the OECD, were worried about getting and maintaining basic health insurance coverage, workers in Canada, with one of the lowest senior poverty rates, were worried about getting supplementary plans. Sheltering workers from risk is a pricey endeavor for US employers. Benefits are expensive for any employer, and Canadian employers worried about their bottom lines with respect to this as well. However, having basic health insurance as a burden of an employer introduces an incentive to discriminate in a way that dental or vision plans do not; as noted by a few US respondents, women of childbearing age and older workers can cost more in these plans. These issues are not likely to be helped by current healthcare reform, which mandates insurance and some employer provision of insurance, but does not make the proposition any less expensive.

Barring efforts at the society level to broaden welfare provision, what can employers do to lessen perceived risk among employees? In all welfare regimes, low-worry firms seemed to share similar characteristics that hinted at stability for their workforces. An emphasis on communication from management was universally beneficial, allowing workers to understand the firm goals, values, and events. This was even helpful in companies that had recently undergone layoffs, for the ones that remained understood why the layoffs occurred and how they helped improve the overall stability of the firm. Additionally, pursuits of growth or placement in a niche market with little competition were beneficial; both gave employees a sense that the firm itself was stable. Smart growth in particular was effective; it helped to have business-oriented leaders focused on firm stability and making sure that any products introduced were products that had potential markets (as opposed to just innovating for innovation's sake, several firms had pragmatic leaders focusing on market applications).

While it is impossible to know how individual respondents might react in different welfare regimes, for few had experience working in more than one country, it is possible to look at the

concerns across the countries and note that the respondent concerns in high liberal regimes were related to more fundamental issues of stability, whereas respondent concerns in low liberal regimes were related to more minor risks. The assumption of risks associated with IT is more palatable for workers in societies where the state takes a greater role in ensuring well-being, and this may have implications for what types of workers can pursue jobs in these high-risk enterprises. Firms can help alleviate these risks, but in the end, no matter what form it takes, even the best employer-dependent protection is something of an illusion. The risk society (Beck 1992; Marshall 2007) has inherent problems that can make it cruel to even the most dedicated workers. As DiPrete has described, highly educated workers are often quite prepared for the most likely negative events. Yet when it comes to the more unlikely events, preparation is more difficult to achieve. Catastrophic events such as major accidents or health disruptions can make it difficult for individuals to continue employment, but continuous employment itself is a condition for protection from these cruel twists of fate. It is also contingent upon the employer's continued success and stability, and the availability of alternative employment prospects. In good times with worker-friendly labor markets, workers are more able to assume that *an* employer, if not *their current* employer, will fill this role. In tighter markets like the one we are currently experiencing in 2011, when average job searches are taking longer and available positions are few and quite competitive to acquire, the unemployed individual can find themselves subject to the whims of fate at a most vulnerable time. True protection must come from the state level, for while the employment relationship may be lost during severe unanticipated events, citizenship is not.

As I move forward in the next chapter to discuss the context of age relations for US IT workers, it is important to bear in mind the institutional context that these workers find themselves in. US workers generally have higher employer-dependence than their counterparts in low liberal nations. Yet US IT workers occupy good jobs, and that is one likely reason that US respondents score comparably on the worry scale. For one thing, though a great deal of the US population has no

health insurance, the US WANE sample is overwhelmingly health-insured. Most also have some pension benefits. Yet all of these benefits are employer-dependent; firms serve as a risk buffer, and US workers are the most likely to suffer if their employment relationships are severed. This adds pressure to the employment relationship, and adds an extra measure of precariousness for older workers who feel pressured to maintain employment so that they can maintain benefits.

Having established the institutional context of this work and the high employer-dependence of US WANE respondents, I turn to specific discussions surrounding age and age relations at work.

## **CHAPTER 4.**

### **AGE RELATIONS IN THE MODERN WORKPLACE: LESSONS FROM POLITICAL ECONOMISTS AND LABOR PROCESS THEORY**

#### **CHAPTER OBJECTIVES**

This chapter addresses the ways that age influences the experience of work in small and medium new economy firms. While literature on age relations at work often focuses on ageism and age discrimination against older workers, in this chapter I examine the broad spectrum of age experiences and age designations to determine how age affects the work experience, both positively and negatively, for workers of all ages. The value of this approach is demonstrated with an examination of age relations that focuses on structure and agency in the labor process, informed by lessons from the theoretical perspectives of the political economy and labor process theory. I conclude that age at work is an issue that involves accommodations, age-based job sorting, and ageist attitudes both positive and negative toward all life phases.

#### **INTRODUCTION**

Age is a sorting mechanism—our interactions can be driven by how we perceive one's age and whether we ascribe to that person positive or negative traits based on our perception. These perceptions are part of a larger fabric of *age designations*, the characteristics both positive and negative that are a part of the social constructions of age categories (Marshall, Morgan, and Marshall 2005; Marshall 2010). These designations that we assign to individuals based on their age categories can be positive or negative (Marshall 2007); I will argue that sometimes, the two are not mutually exclusive.

Ageism (negative attitudes held toward others based on age categories) and age discrimination (negative actions taken against others based on ageist beliefs) are two related phenomena; they are important, though somewhat understudied relative to other forms of discrimination and discriminatory attitudes (McMullin and Marshall 2010; McMullin and Duerden Comeau, forthcoming). Like sexism or racism, ageism can lead to actual discrimination, and it can have profound effects on social outcomes such as health delivery and political status, among others. Importantly, age discrimination can also have implications for work outcomes, as age-based assumptions about ability, trainability, and willingness to work long hours lead employers to seek younger workers over older (McMullin and Duerden Comeau, forthcoming). This can be problematic for older citizens living in what Esping-Andersen (1990) would classify as liberal welfare regimes: countries like the US, where individuals' lifestyles, health, and well-being are closely tied to their market performance (for further discussion of welfare states and risk, please see Chapter 3). In the US, where individuals already bear a great deal of risk burden, ageism and age discrimination can worsen an already challenging situation for its recipient. Ageist attitudes and discriminatory actions have the potential to considerably disrupt individuals' wellbeing in this context, and are therefore important for our consideration.

Yet ageism and age discrimination are only elements of the larger structure of age designations and age relations in the workplace. Though much analysis focuses on the negative outcomes associated with age category attitudes and actions directed at older workers, in fact age differentiation can also be positive (Marshall 2007; also, see for example the discussion in the next section of *sageism* as described by Minichiello, Browne, and Kendig 2000 – the belief held by some that older workers are wiser than younger workers). I argue that a broader concept of age designations<sup>25</sup> (Marshall et al 2005; Marshall 2010), the characteristics attributed to different age

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<sup>25</sup> *Ageism* and *age discrimination* are terms that, much like *risk*, have been defined more neutrally but are more commonly used to describe negative phenomena. Though these terms can be employed neutrally to simply refer to differentiation based on age (see Marshall 2007 for a discussion of this), in their most

categories, is better regarded for our purpose here: to describe how age influences the experience of work in the new economy. When we focus solely on the more negative concepts of ageism and age discrimination, we can overlook ways that individuals can benefit from perceptions of their age categories, and in fact we can also miss some ways that individuals can be negatively affected by their age categories. Values that only appear to be in the interest of individuals in the affected social category can actually lead to negative outcomes (for example, we might think younger workers can adapt to technology more easily than older workers—and therefore assume that they will seamlessly adopt a new technology at work that in fact makes their training-to-date worthless). This does not mean that I will examine evidence of ageism and age discrimination, but rather that I will incorporate it into a broader discussion of age relations and age designations in general.

It is also helpful to examine age in terms of *age relations*, which Calasanti describes as having three components: “First, age serves a social *organizing principle*; second, different age groups gain *identities and power* in relation to one another; and third, age relations *intersect with other power relations*” (Calasanti 2003: 203). I will explore ways that this notion applies to the workplace, with the caveat that I limit the discussion of the third component to the way that age relations intersect with the power structures of the workplace. Other worthwhile applications could include how age and gender, race or ethnicity, and socio-economic status intersect with age in the workplace; these would be valuable courses for future research, with exploration already underway by several authors using the WANE data (see for example Brooke 2010; Jovic and McMullin, forthcoming; and McMullin and Dryburgh, forthcoming, which explore age and gender in IT work).

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common usage *ageism* and *age discrimination* are employed to describe negative attitudes and actions based on age differentiation. The term *age designations* has remained more neutral, and I have chosen to use it to neutralize the discussion from the more negative connotations. Therefore, when I do use the terms *ageism* and *age discrimination*, they are interpreted in the negative sense.

In this chapter, I will demonstrate that some of the ‘positive’ attitudes toward younger workers can actually be exploitative, and part of a larger dynamic of structured antagonism that uses age as a proxy for other forms of tension in the labor process. To accomplish this task I draw on the work begun by political economists and now further developing in labor process theory: the exploration of how personal characteristics such as age, gender, and race affect working life.<sup>26</sup> I argue that age designations are not one-way streets, where old age is viewed negatively by younger workers (and even by older workers themselves; see McMullin and Marshall 2001). Rather, age relations at work are least in part reflective of the political economy and labor process of the modern workplace, and workers of all ages are viewed in some ways that appear to be favorable, and in other ways that are less so. To overlook the impact of age differentiation directed at younger workers, is to miss a major issue in workplace age relations: the effect of what labor process theorists would refer to as “structured antagonism” in the workplace, the strains introduced by conflicting interests in the employment relationship. In short, to understand the impact of age on experiences at work, it is helpful to begin with an examination of the context of workplace age relations and age differentiation as a whole.

Broadly stated then, the goal of this chapter is to examine age relations in the context of work, locating these phenomena in the structures of the workplace. The chapter addresses the third research question outlined in Chapter 1:

- Does age meaningfully affect the experience of workers in new economy firms? Is this effect positive or negative (or both)?
  - Are age relations affected by structures related to political economy and labor process considerations?

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<sup>26</sup> While age has been more explicitly developed in the political economy perspective, it has been suggested as a potential area of inquiry for labor process theory but not yet developed.

I build on the work of McMullin and Duerden Comeau (2011), who examined some of the same survey items and qualitative themes from the WANE study that I use in this analysis. However, I take a different approach and apply a different interpretive framework. Based on the quantitative data, McMullin and Duerden Comeau examine the three negative attitudes toward older workers that are most prominent, and organize their analyses into three analytical areas: older workers' adaptation to new technologies, older workers' desire and ability to train, and older workers' ability to work long hours. In general, they find that older workers were viewed negatively on all three points, and conclude after an analysis of the qualitative data that these perceptions influence attitudes toward hiring older workers.<sup>27</sup> I examine age relations, including positive and negative attitudes toward both older and younger workers in. My interpretive framework is based on structural tenets of the political economy and labor process theoretical perspectives; I build on these perspectives, and further describe how elements of age accommodation are also present in the structure of age relations of the IT workplace.

To that end, this chapter will examine perceptions of age-related bias, age-related attitudes in the workplace towards older workers, and discourse about youth and the aged at work. I examine ways that age relations at work overlap with the labor process, and consider the implications for younger and older workers. The country of interest in this analysis is the US, and this is the anchor for my analyses. However, as there are few significant country differences on the variables of interest in this investigation, I will draw upon pooled cross-national data for the quantitative analyses components of my analysis.

This chapter begins with a general overview of age, age designations, and age relations at work. I follow this with a brief discussion of the political economy approach to age research at

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<sup>27</sup> McMullin and Duerden Comeau (2011) also explored ageism in relation to hiring practices as a fourth analytical area, but found it largely overlapped with the other three themes. They therefore address hiring in their discussions of the other three themes rather than treat it separately.



work, and offer labor process theory as a complementary approach that may also be useful in the study of age at work (these themes were previously discussed in Chapter 1, so I limit their description in this chapter). To illustrate the applicability of these theories to the study of age at work, I analyze age relations in the WANE study. I first establish the state of age relations generally in this sample, examining perceived experiences of discrimination and attitudes towards older workers among WANE web survey respondents. To further explore relative age and age relations, I follow with a discussion of themes from the WANE interviews that resonate with labor process theory and the political economy perspective, and also offer evidence of age accommodation in this population. Finally, I discuss the implications for age theory.

### **AGE DESIGNATIONS AND RELATIVE AGE AT WORK**

*“Over the years, my conception of ageism has continued to evolve. I have come to understand that it is more than images, words, actions or attitudes. It is deeply embedded in society in many areas.”*

-Robert N. Butler (2005)

We have not always recognized age as an important organizing principle of social life, one that has a potential impact on the level of sexism or racism. In a noteworthy career retrospective he wrote in 2005, Butler challenged us to expand our conceptions of ageism and age discrimination. He originally coined the term “ageism” in the 1960s and spent much of his career studying and combating the phenomenon, including during his tenure as the founding director of the US National Institute on Aging. In a special issue of *Social Forces* related to ageism and age discrimination, Marshall described Butler’s quote as a call to arms, “a challenge to sociologists to theorize the link between social structure and individual actions, and to direct their research attention to ageism as a feature of social structure and its structural impact on individuals” (Marshall 2007). In essence, while individual acts of negative behavior are interesting, it is more instructive to examine these acts in the context of broader social structures.

It was, to say the least, a very timely challenge: the year after Butler's retrospective appeared in *Generations*, the first members of the Baby Boom cohort would reach age sixty, and in less than a decade they would meet qualifying ages for full state pensions around the globe. The beginning of a major demographic shift, the rapid aging of the population, was already well underway and it was about to go full-throttle (for a timeline of Baby Boom aging, see Fig. 1 in Chapter 1). This shift would bring a major unprecedented expansion of the population most often described as victims of ageism: older adults.

What is ageism? Butler describes ageism as a serious form of bigotry, "prejudice by one age group toward other age groups.... Age-ism reflects a deep seated uneasiness on the part of the young and middle-aged—a personal revulsion to and distaste for growing old, disease, disability; and fear of powerlessness, 'uselessness,' and death" (Butler 1969). Though he offered the caveat that ageism could apply just as much to negative attitudes on behalf of the old toward the young as it did to negative attitudes on behalf of the young toward the old (Butler 1989), Butler's original definition and work on the subject had a definite old-age bent to it. Subsequent scholars have split the concept of *ageism* from *age discrimination*, arguing that age discrimination is behavioral whereas ageism only refers to attitudes (McMullin and Marshall 2001; Marshall 2007). The two concepts, while theoretically linked, do not necessarily overlap entirely.

As a social construct that corresponds to different events in the life cycle and working life, different ages are also imbued with social meaning that can be positive or negative, as noted by Marshall (2007; see also Marshall et al 2005). One example of positive ageism he cites is the tendency to view older workers as wise, what Minichiello et al. refer to as "sageism" (Minichiello, Browne, and Kendig 2000). However, with respect to older age, many studies have shown that negative attitudes and discrimination abound. In their review of the ageism and age discrimination literature, Roscigno et al. (2007) offer extensive documentation of findings on ageist attitudes. Older workers are perceived to be resistant to change, difficult to train, slow, and

stubborn (see e.g. Crew 1984; McMullin and Marshall 2001; McMullin and Duerden Comeau, forthcoming; Rosen and Jerdee 1976; Shah and Kleiner 2005), and employers are wont to find business reasons for dismissing them or avoiding them in hiring, as they perceive older workers to be expensive, unworthy of training and long-term investment, or too difficult to work with due to ADEA protections (e.g. Adams 2002; Lahey 2008; McMullin and Marshall 2001; Quadagno, Hardy, and Hazelrigg 2003; Scott, Berger, and Garen 1995). In short, ageism and age discrimination towards older workers is beginning to be well-documented. Yet, few examples exist of ageism or age discrimination studies that take a broad view of age relations, beyond caveats that the youth can also experience discrimination or that age differentiation might also be positive.

Many of these studies are quite descriptive in nature, and do not invoke theory. Two major exceptions stand out. One is the work of McMullin and Marshall (2001), who applied the political economy perspective to the study of ageism among garment workers and their employers. McMullin and Marshall examine age relations among this population, and find that ageism and age discrimination are often justified and legitimated by business rationale – older workers are not as productive or are slow. Jobs are not adapted to accommodate these workers; rather, younger workers are used to replace older workers for easier jobs, and older workers are shifted to jobs where their experience is helpful. McMullin and Marshall note that the age designations assigned to older workers can be both positive and negative:

Older workers are thought to be less powerful and less productive than younger workers, and alternatively, older workers are thought to have more experience, be more responsible, and make fewer mistakes in their work than younger workers. Regardless of whether any of these views are "true," the fact that they appear in the discourse of the workers suggests that age is a potential basis of division and conflict among the working class and thus a threat to working class solidarity. (McMullin and Marshall 2001: 21).

This work applied the structural principles of the political economy to the workplace, and found that owners and workers use age to organize work, that young and old workers gain identities in

relation to one another, and that age relations do in fact intersect with the power relations of the workplace. However, this work did not necessarily investigate the extent to which younger workers could also be disadvantaged by perceptions of their age category.

Another notable exception is the recent work of Roscigno and colleagues (2007) who offer perhaps the greatest recent theoretical advancement in the study of age relations in the workplace in their use of social closure theory to describe age discrimination processes. Social closure, based in Weber and more often used in stratification work, posits that groups maximize their own access to power and resources by restricting others' access to it (Parkin 1974; Weber 1968). Roscigno et al. used this concept to introduce power and status differentials to the workplace, focusing largely on older workers. Surveying workplace discrimination claims over 15 years in a Midwestern state, the group finds that the workers most vulnerable to discrimination are skilled and semi-skilled workers around 50 years of age and those closest to retirement age. They find a link between discrimination and status, and also find gatekeepers use age stereotypes to justify exclusionary practices. Finally, they find 'age-neutral ideologies' about issues like cost and business practices are used to justify age discrimination.

The Roscigno et al. piece is a major step forward for work on ageism and age discrimination in employment, wedding age discrimination at work to broader themes of economic stratification processes. They make a compelling argument that social closure theory fits when it comes to ageism and age discrimination against older workers (a similar argument has also been made by McMullin 2004 in her discussion of age relations and opportunity hoarding). However, like most other studies on the topic, their scope is limited to older workers. The exclusion of younger workers and the use of absolute age categories can be problematic, as noted by McMullin and Berger:

Relational understandings of gender and age recognize that small differences in age and gender categories tend to be exaggerated and made problematic. Hence, men and middle-

aged adults are seen as genderless and ageless, and the inequalities that women and younger and older adults face are assigned meaning according to these differences. (McMullin and Berger 2006: 205).

The focus on old age and age cut-offs in Roscigno highlights inherent issues surrounding the use of legal discrimination as a focal point. In the US the Age Discrimination in Employment Act of 1967 established age 40 as the threshold for discrimination claims (Schuster and Miller 1984).<sup>28</sup> Legal categories offer but one way to operationalize the term *older workers* – and they may not even be the most pertinent to how individuals define the category. I turn now to a discussion of relative age.

### *Relative Age in IT Work*

Any investigation that solely focuses on age as years-lived may miss important themes about the experience of age. Though we can begin efforts to understand aging in society with a focus on demographics, as I did in Chapter 1, it is important to note that age is a social construct, and ‘young’ and ‘old’ are interpretive terms that can have many connotations, both good and bad. McMullin and Dryburgh note, “There is much complexity...in identifying age-based biases in paid work, in part because what is meant by older and younger varies along several dimensions” (2011: 8).

One might wonder why it is appropriate to discuss ageism and age relations in a workforce that is, in demographic terms, quite young. Yet age is more than demographics alone – the terms “older” and “younger” are actually relative and socially-defined, especially in the area of work. The interpretation of age is influenced by factors beyond years lived, which can involve events in the life-cycle or those that are structural or economic.<sup>29</sup> Additionally, the interpretation

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<sup>28</sup> The ADEA is the most universally applicable standard for legal cases of discrimination. While the Age Discrimination Act of 1975 protects workers of all ages, its application is limited to programs receiving federal monies.

<sup>29</sup> Life-cycle events include birth and family transitions (marriage, entry to parent or grandparent status) while structural events include education and worklife transitions (entry to schooling, graduations, first

of age can be defined by generations, most broadly defined by Mannheim (1952) as a social location based on birth cohort and the defining historical events that shape the cohort's identity, even including technological developments (McMullin, Duerden Comeau, and Jovic 2007; McMullin, Jovic, and Duerden Comeau, forthcoming).

Workers can also be considered “older” at very different ages depending on the skillset required by their job and the age composition of their industry. McMullin and Dryburgh (2011) discuss this phenomenon with the example of professional sports, where it one can be a ‘senior’ golfer at age 50, an older player in baseball or hockey in the mid-30s, and quite old in gymnastics in the 20s. Given the demographically young workforce in IT, it has been found that IT workers are often considered to be old by their 30s or 40s (McMullin and Duerden Comeau, forthcoming).

In simple terms, the absence of a large population of workers near the age of pension eligibility does not necessarily mean that there is not a population of ‘older’ workers in this industry. To the contrary, McMullin and Duerden Comeau (2011), the first to publish on ageism in an industry where the average age was less than 45, actually found that IT workers in the WANE sample considered ages we might otherwise think of as quite young to be old. They note that respondents in their twenties and thirties often described themselves as older workers. Additionally, after answering a series of attitudinal questions about older workers, WANE web survey respondents were asked to answer what age group they were thinking about when they were thinking about older workers. Forty nine percent of the respondents answered that they were thinking of workers in their twenties, thirties, or forties. The general trend of identifying workers who are still a ways from reaching pension age as ‘older’ is likely due to the youthfulness of this workforce, where the average age of WANE web respondents internationally was 38 (McMullin

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jobs, transition jobs, retirement) or the age structure of one's industry and occupation. While these events are not universally experienced, and the order of events may vary, they constitute a normative trajectory that has connotations about the age of the individual (Marshall Mueller 2003, Neugarten, Moore, and Lowe 1965).

and Duerden Comeau, forthcoming). Old age was actually often designated by family status; those workers who were married or had children were described as older, while those who were single were considered to be young (Marshall et al. 2005).

Finally, ‘relative age’ necessarily implies that one has a counterpart to compare to. Older is relative to younger, and vice versa. The term older is itself an implied comparison, and many questions can be extrapolated from the findings on older workers that relate to their youthful counterparts. If older workers are too expensive to keep around, is this because younger workers are being paid too little? If older workers are slow, is this because capital more efficiently extracts surplus value from younger labor? If older workers are resistant to change or difficult due to their legally protected status, are they too difficult for capital to control? In short, when old age discrimination is viewed in the context of age relations at work as a whole, rather than solely focusing on the old, different nuances emerge.

I suggest two complementary lenses that can help us examine these age relation issues: the political economy perspective and labor process theory.

### **ADDITIONS TO THE THEORETICAL TOOLKIT: THE POLITICAL ECONOMY PERSPECTIVE, LABOR PROCESS THEORY, AND THE STUDY OF AGE RELATIONS AT WORK**

The political economy perspective and labor process theory both pertain to the distribution of power and resources in society, and can be applied to issues surrounding structures such as race, gender, and aging. As described in Chapter 1, the political economy perspective offers a broader, society-level structural approach, whereas the labor process theory operates on a meso-level, studying the struggles surrounding production. While political economy has been used for decades to examine age-related issues, its use in aging workforce studies has been largely limited to work about the retirement transition. Labor process theory is directly focused on social class but has more recently been applied to race and gender structures; I argue that it can

also be applied to age structures. Both perspectives can be used to identify and describe competing interests in the workplace, which were defined by Marks and Thompson as “a socio-economic position that generates a propensity to act in defense or pursuit of scarce material resources” (Marks and Thompson 2010). I will discuss each perspective in turn.

As discussed in Chapter 1, the political economy perspective is a general theoretical approach that age theorists have adopted. It draws on elements of Marx’s theories of class structure, but is also influenced by Weber’s theories about class (Kail, Quadagno, and Keene 2009). Weber described spheres that influence stratification, including the ownership of private property (wealth), status groups (which can be occupations-based), and parties (groups explicitly seeking power) (Weber 1968). The approach is quite structural, emphasizing the constraints group members face in the economy, the different locations of groups in the political structure, and the uneven redistribution of resources by society (Estes 1999).

Examples of work in the political economy of aging include the cumulative disadvantage literature (Crystal and Shea 1990; O’Rand 1996; Sampson and Laub) and work on welfare states as systems of stratification (Olson 1982; Phillipson and Walker 1986). Insofar as it has been applied to the workplace, the focus is often on older workers and the retirement transition (Hayward and Grady 1990; Johnson and Neumark 1997; Quadagno, Hardy, and Hazelrigg 2003). Yet the political economy focus on structure has the potential to illuminate many issues related to age in the workplace: examining the structure of education and its role in economic success through an age lens (is education equally accessible/helpful across the age spectrum?), applying cumulative advantage theory to the workplace (do workers find themselves on tracks that permanently affect their ability to advance?). One example of an application of political economy perspective to the aging workforce that goes beyond the retirement transition is by Hirsch and colleagues, who find that older workers have constrained employment options based on



occupational structures such as compensation, skill requirements, working hours, and conditions (Hirsch, Macpherson, and Hardy 2000).

Labor process theory, as described in Chapter 1, is rooted in an assumption of the indeterminacy of labor (O'Doherty and Willmott 2009). In wage labor, the capitalist purchases the labor power of the worker. This purchase does not guarantee any set level of profit from the fruits of the worker's labors – the worker could shirk, and the capitalist would lose money, or work at an accelerated pace, and the capitalist would profit well. Therefore it is in the capitalist's interest to extract as much labor out of the worker as possible; yet this is not necessarily in the worker's interest. The management process is an effort to extract that value.

This process is most easily understood in terms of factory work, and the perspective itself was launched by Braverman's influential work, *Labor and Monopoly Capital*, which largely focused on factory labor. Drawing on Marx, Braverman argues that in factory work a worker is paid a set wage and expected to work a set number of hours. In those hours, a worker can produce a certain number of widgets. The work may be tiring and repetitive, and the worker may not see any increase in wages or bonuses if he or she is able to produce extra widgets. Yet the capitalist will see an increase in profits for extra widgets, so the worker and the capitalist will experience the antagonism built into this structural difference in interests.

In small firm IT work, the terms are not as clear for two major reasons: IT is professional work, and in small firms the extraction of surplus value is not always central to operations. First, as a professional job, IT does not have set hours, and it does not produce widgets; this makes it much more difficult to assess the production of surplus value. It does not, however, mean that white collar work is not subject to the labor process; the creation of physical commodities was not a condition of Marx's discussion of productive and non-productive workers (Smith, Knights, and Willmott 1991) and Braverman himself examined the labor process of clerical and retail work,

other forms of non-manual labor. However, in small firms the proportion of operating budget that goes to salaries is fairly high; this means that it is in the owners' and managers' interests to get workers to work as efficiently as possible, often taking on more roles than one might in a larger firm, to minimize the need for extra staff. While owners and managers may not push staff to increase productivity as part of an overt effort to produce greater surplus value, that does not mean that their interests are neatly aligned; rather, there is a structural pressure to keep staff costs down, and this in turn contributes to a structured pressure on these workers in the labor process. The pressures here are not necessarily due to an overtly sinister desire on the part of the owners and managers to wring every last dollar out of their employees. In fact, several owners in our sample had forfeited their own wages in the past or mortgaged their homes to make payroll. Rather, it is a fact of life in small firms: employees are often asked to multitask, or work long hours to meet client obligations, as the financial margins are smaller and it is not always possible to bring in extra help when needed. They will not necessarily see extra benefit or extra pay for these extra efforts; rather, these efforts help insulate the company from the possibility of insolvency.

Additional tensions in interests arise due to the nature of IT work itself; as a rapidly changing, innovative industry, IT workers who do not continuously develop skills may find themselves unemployable over time. Yet small firms face pressures to extract work from labor efficiently and they do not always have comfortable margins in their budgets. This can make training a low priority, despite its importance for the continued employability of incumbents. IT employees find themselves in a situation that is increasingly common in the modern workplace; employers shift the responsibility for skill maintenance and development to the employee (Thompson and Smith 2010), or rely on hiring as a way to find fresh talent and skills (this has the potential to reduce employer commitment to retention of older workers).

However, Wilkinson (1999), Barrett (2000), and Barrett and Rainnie (2002, 2004) note that size itself may not have that great an effect on firm industrial relations, and Barrett and Rainnie object to the classification of small firms as a category that has any universal characteristics (2002). Barrett and Rainnie argue that the labor process approach is quite relevant to the study of these firms, as small firms are best understood in terms of totality (small firms are related to large firms in their industry), change (focus on the mechanisms of change inherent in the system rather than cause and effect), and contradiction (systems are internally contradictory, and this drives change). They outline an integrated research approach:

...at the heart of this analysis must lie the questions of extraction and realization of surplus value as well as the contradictions between problems for management that arise at different moments in the circuit of capital. In structural terms this means considering the firm within its sector and the sector's trajectory of development (in an historical sense). However, to overcome charges of this analysis being overly structuralist, equal priority must be given to the reality of people's working lives within the firm, which entails considering how this reality is formed and constrained by the interplay of the labor market and the individual's expectations of work. Such an approach to analyzing industrial relations in small firms must therefore start with the totality of economic and social relations in a particular sector and its constituents rather than the small firm per se. Dialectics and combined and uneven development are used to show how this can occur in the integrated approach (2002: 417).

To address the combined and uneven development, Barrett and Rainnie offer a typology of SME firms based on four types of relationships between SMEs and larger firms in their industries, which I outlined in Chapter 1: *dependent* firms complement the interests of large firms (e.g. sub-contractors), *dominated* firms compete with large firms through exploitation (e.g. firms that exploit family labor), *isolation* firms fill a particular niche or geographic area that is unattractive to larger firms (e.g. restaurants or hairdressers), and *innovative* firms that develop ideas larger firms may not be able to, though large firms often appropriate the results (e.g. information technology startups). The WANE cases fit into the innovative category.<sup>30</sup> In using WANE data, I am comparing SMEs in one industry, as suggested by Barrett and Rainnie, and further I am

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<sup>30</sup> These categories are not mutually exclusive, and some WANE firms could occupy multiple categories. However, as an industry, their defining characteristic is innovation.

comparing SMEs that fit the same category in the typology. This facilitates comparison across the firms.

The structural approach emphasized by the political economy perspective and labor process theory fits with work-related age analysis as several age structures overlay the employment system. First, there is the seniority system, the way many firms determine increases in pay, benefits, and positional power. Age can be a proxy for experience, and at work, experience can qualify workers to take on higher level jobs or manage others. Age can also be a proxy for familiarity with the most current coding systems, which can make younger workers more readily able than their older counterparts to work directly on the technical aspects of IT products and services. This creates a system in which the older workers are often the managers, and the younger workers are those being managed. This can be aggravated by seniority-based career trajectories, which may keep workers of similar age in similar positions, reducing egalitarian interactions between older and younger workers. In essence, when old and young interact, power dynamics are also at play.<sup>31</sup>

To illustrate the applicability of these perspectives, I turn to an analysis of age relations in IT using WANE data. If the political economy and labor process theory are applicable here, I expect to see evidence of age bias in the IT workplace, and that discourse about age in the workplace will be described in terms related to the structure of the labor process itself.

## **DATA AND METHODS**

As this analysis is focused on the attitudes towards workers of different ages and perceived discrimination experiences, I am examining individual-level data from the WANE project. As described in Chapter 1, WANE is an international, cross-comparative study of

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<sup>31</sup> Another age- and work-related structure is the retirement system, in which the work system exit for workers of advanced age is normalized by public policy. In the U.S. this is normalized by Social Security regulations to somewhere in the 62-67 year range, depending on birth cohort.

information technology (IT) workers using a case study methodology, and was fielded between late 2004 and early 2006. This analysis involves three components. First, I first examine quantitative data pooled from all four WANE countries to establish the context of age relations in the workplace. Second, I perform an analysis that focuses on attitudes towards older workers only, again using the pooled data. Finally, this is followed by qualitative analysis using data on attitudes towards both young and old workers, focusing on data from US respondents to examine the discourse surrounding age in the workforce.<sup>32</sup>

### *Web Surveys for Case Studies*

The first task of this chapter is to ascertain what exactly the current attitudes towards older workers are and how these attitudes are influenced by select individual, organizational, and regional attributes. For this, I turn to the WANE web-based survey. A descriptive profile of the respondents can be found in Table 2.4 of Chapter 2 (page 47), including several variables I will use in this analysis (mean age of survey respondents, sex, minority status, marital status, parent status). For this analysis, I will also focus on age groups (decades), the mean age of respondents at the firm, education, and supervisor status. Table 4.1 offers an overview of these additional variables. I grouped the ages into decades: those in their twenties, thirties, forties, fifties, and sixties. The age group 60+ was quite low in numbers (around 2%), and for further analysis has been added to the 50s group to create a 50s+ group. The largest age grouping is the thirties, followed by the forties and the twenties. Over 43% reported that they managed or supervised others. I included a dummy variable of graduate education versus none (respondents were asked to nominate the highest level of education they completed, with categories corresponding to their

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<sup>32</sup> I limit qualitative analysis to the US due to the overwhelming amount of data from the age codes in all four countries. As age was a central component of the study, most interviews included a significant age discussion; the Age code in the US interviews alone yielded 350 pages of output. After reading the US output and coding for themes, I reached content saturation.

national systems). Nearly a third of the total sample reported graduate education. There were no significant differences between the countries on these descriptive variables.

Table 4.1. Descriptive profile of WANE web survey sample for pooled WANE survey data (Australia, Canada, UK, and US)

	Australia	Canada	England	US	Total
Web survey participants (N)†	68	94	117	122	404
Age 20s (%)	25.0	24.3	25.6	23.8	25.40
Age 30s (%)	32.3	36.0	34.2	28.7	33.40
Age 40s (%)	25.0	29.7	25.6	29.5	27.10
Age 50s (%)	14.7	8.1	13.7	14.8	11.80
Age 60s (%)	3.0	1.8	.9	3.3	2.30
Mean age at firm (range)	24.67 – 50.25 yrs	27.38 – 49.50 yrs	35.32 – 58.00 yrs	31.09 – 51.60 yrs	24.67-58.00 yrs
Graduate Education (% yes)	23.6%	22.1%	33.9%	32.2%	28.7%
Manager (% manages/supervises others)	43.6%	44.2%	44.4%	38.6%	42.5%

†Individual item responses varied, so the Ns presented represent the most conservative counts. Australia Ns varied between 68 and 89, Canada 94-113, England 117-127, US 122-152, and the total 404-481.

Table 4.2. Supervisor status by age (decades). N=410

			Supervise/manage other people		Total
			Yes	No	
Age (by category)	in their 20s	Count	26	75	101
		% within Age (by category)	25.74%	74.26%	100.00%
	in their 30s	Count	55	80	135
		% within Age (by category)	40.74%	59.26%	100.00%
	in their 40s	Count	58	54	112
		% within Age (by category)	51.79%	48.21%	100.00%
	50s+	Count	33	29	62
		% within Age (by category)	53.23%	46.77%	100.00%
Total			172	238	410
			41.95%	58.05%	100.00%
Pearson chi-square = 18.662*** (3 df)					

\*\*\*p<.001

As positional power is an important component of the effort to connect age to the labor process, I ran additional chi-square tests comparing age to managerial status. Age categories were positively correlated with managerial status ( $p < 0.001$ ), indicating that older workers are more likely to be managers. The mean age of respondents who supervised others was 40.68 (std. dev. 9.73), older than both the mean age of non-supervisors (36.10 years old, std. dev. 10.21) and the mean age of the total sample (38.03 years old, std. dev. 10.25). Table 4.2 presents the age profile by supervisor status for web survey respondents; only about one-quarter of workers in their

twenties report that they supervise others, compared to about 41% of workers in their thirties and more than half of workers in their forties and above.

The survey also asks respondents to estimate the age of their immediate supervisor, in decades (e.g. twenties). I compared these estimates to the age (in decades) of the respondents themselves, and found that nearly half of the respondents actually classified their supervisors as younger than themselves (Table 4.3). This complicates the interpretation of age and positional power, indicating that the two are not so neatly correlated in these small IT firms. It is possible that as these are perceived ages, and overall age does correlate with managerial status, the respondents are mis-classifying their superiors. However, these mis-classifications are still theoretically interesting due to the social construction of meaning and age. In essence, if you believe your supervisor is younger than you, than for all intents and purposes the attitudes you hold toward your supervisor's age are indicative of your attitudes towards younger workers, whether the supervisor is actually younger or not.

Table 4.3. Comparison of respondent age to respondents' estimation of supervisor age (in decades) for pooled WANE survey data (Australia, Canada, UK, and US)

Respondent's age is...	Frequency	Valid Percent
younger than supervisor	58	17.0
same decade as supervisor	122	35.7
older than supervisor	162	47.4
Total	342	100.0
System Missing	139	
Total	481	

### *Semi-Structured Interviews for Case Studies*

The second stage of this analysis is rooted in the semi-structured interviews component of the WANE case studies. As discussed in Chapter 1, these interviews were transcribed and housekeeping codes were applied by the international team using NVivo software (the codes included six major coding categories: Employment Relations, Diversity and Employment Relations, Life Course Transitions, Human Resource Management, Current Employment/Employer, and Health).

This analysis is based on the US interviews (N=106, 90% response rate). Using NVivo 8, I selected all passages related to one housekeeping code in the Diversity and Employment Relations category: Age. A central component of the study, the Age code appears in every US interview and this query yielded a wealth of data (a total of 406 Age references are available from the US interviews).

## RESULTS

The quantitative analysis I employ is two-pronged. First, I use quantitative data to establish the general context of age relations in IT – I investigate perceived discrimination measures, followed by an examination of ageism using a series of attitudinal questions about older workers. However, as age has been demonstrated to be quite relative in this industry (McMullin and Duerden Comeau, forthcoming), I perform additional qualitative analyses to more accurately explore age issues in detail. I use interview data to assess the discourse on age in the workplace, focusing on discussions of age as related to status and production.

### *Perceived Age Discrimination Experiences of Survey Respondents*

Age discrimination is one of the most prevalent forms of discrimination these respondents face. The WANE survey included a question series related to experiences of perceived discrimination in employment (q81-84). For the first question, respondents were asked: “Has your treatment in your CURRENT JOB ever been affected favorably or unfavorably by your...” and then offered a series of personal characteristics to respond to (response categories are provided verbatim in Table 4.4). The next questions asked specifically about PREVIOUS JOB, but were otherwise identical. Answer categories included three options: “Yes, favorably”<sup>33</sup>,

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<sup>33</sup> The wording of this response category is a bit problematic; respondents were asked about their treatment for being too young or too old. It is unclear how you can be treated favorably for being *too* young or *too* old. The favorable category yielded few responses. Likely, those that did respond that they had been treated favorably were omitting the word “too” in their minds, but the wording of this question clearly may have



“Yes, unfavorably”, or “No”. Separate questions were presented for current job and prior jobs; I merged these two questions to determine if respondents had ever been treated differently in their work history. Table 4.4 presents the number and percentage of respondents answering that they had been treated differently, in descending order of percentage describing unfavorable discrimination. The top four forms of unfavorable treatment in the workplace are based on being too young, sex, family responsibilities, and being too old.

Table 4.4. Reported discrimination experiences of WANE web survey respondents (N=406)  
N (%) Experienced  
Unfavorable Treatment

Being considered too young	89	(21.92%)
Sex	53	(13.05%)
Family responsibilities	33	(8.13%)
Being considered too old	31	(7.64%)
Race or ethnicity	16	(3.94%)
Religion or religious beliefs	15	(3.69%)
National or ethnic origin	13	(3.20%)
Mental or physical disability	7	(1.72%)
Sexual Orientation	6	(1.48%)
Criminal conviction	2	(0.49%)

It is important to note that the vast majority of the population reports no discrimination experience – even for the item with the largest respondent population that perceived discrimination (being considered too young), only one fifth of the population has had a negative experience. In many ways this speaks to an industry where age discrimination is not a very big story. However, it is important to note that while this question and the corresponding table discuss the prevalence of these forms of discrimination in the industry generally, there is an inherent selection bias at play here. The pool of IT workers is disproportionately young, white, and male, so there may be age bias, sex bias, race bias, or any host of other biases that keep workers we might consider to be at-risk out of the IT workforce. Older workers who have left the IT industry because they no longer can find jobs may have experienced age discrimination; they

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biased the answers or led to underreporting of “favorable” treatment due to age categories. As I cannot resolve this issue, I have focused on the more accurately-worded response category: unfavorable treatment.

also are not around to complete surveys in this study. I will address directly in the following paragraph the extent to which groups who are more vulnerable to discrimination are represented by the table – for example, the percentage of workers in their twenties who report experience with discrimination for being too young, and the percentage of workers aged 50 and over who report experience with discrimination for being too old. As a workforce that is disproportionately white and male, similar analyses could be performed for other categories: compared to the total sample of IT workers, workers in what we might consider the at-risk population for discrimination experiences (women who report having experienced gender discrimination, minorities who report having experienced discrimination for their race or ethnicity) can be expected to have higher levels of reported discrimination.

Prevalence of perceived age discrimination is even greater when sorting by age group, as Table 4.5 demonstrates. While perceived age discrimination for being young appears to be a larger problem in the workplace, when we examine workers who actually are in the upper half of the sample for age, the problem of perceived age discrimination for being too old is also quite pronounced. Workers in their 20s and 30s comprise over half of respondents, and only about 1-2% of these workers report negative age discrimination for being too old. However, a third of 20-somethings and a quarter of 30-somethings report negative discrimination for being too young. Among 40-somethings, there was a sort of equilibrium – nearly 11% responded that they had been treated unfavorably for being too old, and nearly 11% responded that they had been treated unfavorably for being too young. Finally, about a fifth of respondents in their 50s and 60s reported having been treated unfavorably for being too old, while a little more than 8% reported that they had been treated unfavorably for being too young. In essence, it is the young who feel they have been treated poorly for being too young, while it is the old who feel they have been treated poorly for being too old. This indicates that though it is not omnipresent, there is some workplace conflict between the young and the old. Again, it is important to note that generally,

this may be considered a success story – though the percentage of workers in their 20s who have experienced unfavorable treatment for being too young is fairly high (37%), discrimination experience is actually otherwise quite low among these age categories. Still, there remains a considerable group of people both young and old who feel that they have experienced unfavorable treatment on the basis of their age.

Table 4.5. Web survey respondents reporting unfavorable discrimination for being "too old" or "too young"

	Too old (percentage of age category)		Too young (percentage of age category)	
	N	% of age category	N	% of age category
Age: 20s	1	1.00%	37	37.00%
Age: 30s	3	2.31%	34	26.15%
Age: 40s	12	10.81%	12	10.81%
Age: 50s and 60s	13	21.67%	5	8.33%

Table 4.6 presents the perceived discrimination experiences among those who responded that they had been treated unfavorably due to their age in their current or former jobs. Among those who reported experiencing discrimination for being too old, top forms of perceived discrimination identified included not being interviewed or hired, not promoted or assigned certain jobs, not given job training or development, or being made to feel left out. Not being promoted or assigned certain jobs and not being interviewed or hired were also top forms of perceived discrimination among those who reported experiencing discrimination for being too young. However, those who reported youth discrimination also reported they were paid less for the same work, and excluded from work activities. These findings indicate age-related tension, which is not simply one-sided discrimination towards older workers but may instead point to a more pervasive conflict between older and younger workers.

Table 4.6. Reported discrimination experiences among WANE web survey respondents who reported having been treated unfavorably due to age.

	Too Young		Too Old	
	Current job N=38	Previous job N=63	Current job N=18	Previous job N=19
Not interviewed or hired for other jobs at company	8	26	7	12
Not promoted or assigned certain jobs	15	44	10	12
Given a poor performance evaluation	3	3	4	4
Demoted	0	0	0	19
Not given job training or development	3	12	5	6
Paid less for the same work	13	33	3	4
Felt pressure to leave job	4	3	3	5
Made to feel left out	11	9	4	6
Excluded from work activities	3	14	4	5
Excluded from social activities	1	5	3	6
Harassment	6	1	2	2
Other	5	4	1	2

### *Attitudes toward Older Workers*

While questions in the series described above directly address instances of perceived age discrimination, the web survey also asked respondents a series of attitudinal questions about older workers, previously adapted by Marshall (1996) from a series developed by Taylor and Walker (1994). A thirteen-item question (q79a-m) asks the respondent to think about the older people with whom they worked, and indicate on a four point Likert-type scale how much they agreed or disagreed with a series of 13 statements (1=Strongly Disagree, 2=Disagree, 3=Agree, and 4=Strongly Agree).<sup>34</sup> Table 4.7 outlines the web survey responses for these items. Items with a negative connotation for older workers were then recoded for this analysis, such that all items were coded where 1 was indicative of a negative orientation toward older workers and 4 was indicative of a positive orientation. Some items had minor significant differences between the countries, as noted in the table. It is important to note that most of the views toward older workers are in fact positive; the mean responses for all items are over two, indicating that workers ‘agree’

<sup>34</sup> Statements included, “Can adapt to organizational change,” “Serve as mentors for younger workers,” “Are highly respected,” “Do not want to receive training,” “Are too cautious,” “Are more reliable than younger workers,” “Have trouble working long hours,” “Are productive employees,” “Cannot adapt to new technology,” “Are harder to train than younger workers,” “Dislike taking instructions from younger workers,” “Are less likely to be promoted,” and “There is tension between younger and older workers.”

or ‘strongly agree’ with the positive statements about older workers, and ‘disagree’ or ‘strongly disagree’ with the negative statements about older workers. Less than 10% of the population agrees or strongly agrees that there is tension between older and younger workers. Over 95% ‘agree’ or ‘strongly agree’ that older workers are productive employees. The majority (about 76%) agreed or strongly agreed that older workers are highly respected, though about a quarter of respondents dissented.

However, the picture for older workers is not universally positive. Nearly a third of the sample agrees that older workers cannot adapt to new technology. Here, industry context is critical – while the inability to adapt to new technology might not be critical in other industries, in an industry where *technology is business*, to agree with this statement is something of a vote of no-confidence in older workers. In a similar vein, nearly a third of respondents agreed that older workers are harder to train than younger workers. Nearly 23% agree that older workers do not want to receive training. Again, this is not a majority. The majority of respondents had more positive attitudes. However, due to the rapidly changing nature of the IT industry and the central role that continuous technological advancement plays in it, the belief on the part of such a large group that older workers are harder to train, or unwilling to be trained, is worrisome.

Another source of concern is the 37% of respondents who agreed that older workers dislike taking instructions from younger workers. Given the high proportion of workers who were older than their supervisors, this might be a source of tension between older and younger workers. It may also contribute to the perception by about 31% of the sample that older workers are less likely to be promoted. Yet over 80% agreed that older workers serve as mentors and teachers for younger workers; while about a fifth dissented, the majority of respondents feel that older workers have something valuable to pass along to others. Taken as a whole, these results may indicate a normative career trajectory, where younger workers are considered to be the innovators; they learn from older workers, who may no longer be viewed as ‘on the cutting edge’ but nonetheless are able to manage others.

There were a few country differences that emerged on the individual variables, and the differences that were significant were very minor. For most variables where there was a significant country difference, Canada was the most friendly to older workers; Canadians were most likely to agree that older workers can adapt to organizational change, and least likely to agree that older workers did not want to receive training or had trouble working long hours (Australian respondents were the most least likely to agree that older workers could not adapt to new technology). On the overall assessment, “There is a tension between younger and older workers,” Australian respondents were the most likely to agree while UK respondents were the least likely to agree. Generally these differences appear to indicate that workers in low liberal regimes (Canada and the UK) have more friendly attitudes toward older workers, while the high liberal Australians have somewhat more negative views. Yet the differences are very small, and clear patterns between the countries are not compelling.

I created a correlation matrix for all of the attitudes towards older workers items (Table 4.8). Items in bold denote negative correlation. Across the board, each item is significantly positively correlated with all other items with two exceptions: “Are more reliable than younger workers” and “Are less likely to be promoted.” These items had r-values approaching zero in several correlations, indicating that the items were not correlated, and the item “Are more reliable than younger workers” had several negative relationships with other items. I set these two items aside as I moved forward with analysis.

Table 4.7. Descriptive statistics for attitudes towards older workers items, pooled web survey data (N=404)

	Total Sample Response Distribution (%)		Mean (SD) by Country					Sig
	Disagree/ Strongly disagree	Agree/ Strongly Agree	Australia	Canada	UK	US	Total	
Older workers:								
Can adapt to organizational change	14.3	85.6	2.84 (.441)	3.04 (.573)	2.88 (.419)	2.93 (.524)	2.93 (.498)	*
Serve as mentors and teachers for younger workers	19.0	80.9	3.00 (.542)	2.98 (.646)	2.92 (.618)	2.94 (.696)	2.96 (.636)	
Are highly respected	24.3	75.7	2.80 (.502)	2.95 (.618)	2.83 (.620)	2.91 (.670)	2.88 (.618)	
Do not want to receive training <sup>R</sup>	77.0	22.9	2.99 (.500)	2.72 (.685)	2.89 (.584)	2.81 (.589)	2.84 (.602)	*
Are too cautious <sup>R</sup>	75.6	24.5	2.86 (.522)	2.74 (.641)	2.84 (.556)	2.77 (.509)	2.80 (.557)	
Are more reliable than younger workers	50.2	49.9	2.61 (.647)	2.52 (.685)	2.44 (.623)	2.63 (.688)	2.55 (.665)	
Have trouble working long hours <sup>R</sup>	77.8	22.2	2.86 (.522)	2.76 (.669)	3.00 (.541)	2.83 (.616)	2.87 (.598)	*
Are productive employees	4.4	95.6	3.10 (.425)	3.22 (.508)	3.12 (.494)	3.19 (.433)	3.16 (.468)	
Cannot adapt to new technology <sup>R</sup>	69.0	31.0	2.59 (.714)	2.77 (.809)	2.89 (.627)	2.75 (.669)	2.77 (.704)	*
Are harder to train than younger workers <sup>R</sup>	69.8	30.2	2.74 (.560)	2.74 (.779)	2.83 (.577)	2.77 (.647)	2.78 (.646)	
Dislike taking instructions from younger workers <sup>R</sup>	63.3	36.7	2.52 (.633)	2.59 (.663)	2.70 (.620)	2.65 (.570)	2.63 (.618)	
Are less likely to be promoted <sup>R</sup>	68.9	31.2	2.67 (.560)	2.83 (.636)	2.66 (.543)	2.71 (.703)	2.72 (.621)	
There is tension between older and younger workers <sup>R</sup>	91.4	8.6	3.01 (.675)	3.11 (.598)	3.31 (.547)	3.19 (.547)	3.17 (.589)	**

<sup>R</sup> Items with a negative connotation for older workers were reverse-coded.

\*p≤.05      \*\* p≤.01

Table 4.8. Correlation matrix for attitudes towards older workers scale items, pooled web survey data (N=402 Respondents)

Older workers...	Can adapt to change.	Serve as mentors and teachers for younger workers.	Are highly respected.	Do not want to receive training. <sup>R</sup>	Are too cautious. <sup>R</sup>	Are more reliable than younger workers.	Have trouble working long hours. <sup>R</sup>	Are productive employees.	Cannot adapt to new technology. <sup>R</sup>	Are harder to train than younger workers. <sup>R</sup>	Dislike taking instructions from younger workers. <sup>R</sup>	Are less likely to be promoted. <sup>R</sup>	There are tensions between older and younger workers. <sup>R</sup>
Can adapt to change.													
Serve as mentors and teachers for younger workers.	.375**												
Are highly respected.	.392**	.535**											
Do not want to receive training. <sup>R</sup>	.279**	.144**	.162**										
Are too cautious. <sup>R</sup>	.369**	.219**	.215**	.468**									
Are more reliable than younger workers.	.165**	.216**	.207**	.009	<b>-.022</b>								
Have trouble working long hours. <sup>R</sup>	.228**	.148**	.157**	.309**	.396**	<b>-.044</b>							
Are productive employees.	.360**	.307**	.378**	.240**	.259**	.219**	.262**						
Cannot adapt to new technology. <sup>R</sup>	.179**	.159**	.105*	.172**	.239**	.049	.110*	.264**					
Are harder to train than younger workers. <sup>R</sup>	.345**	.254**	.273**	.345**	.411**	.134**	.368**	.300**	.377**				
Dislike taking instructions from younger workers. <sup>R</sup>	.197**	.116*	.140**	.226**	.243**	<b>-.010</b>	.224**	.172**	.212**	.390**			
Are less likely to be promoted. <sup>R</sup>	.095	.006	.180**	.114*	.178**	<b>-.209**</b>	.240**	.088	.104*	.195**	.141**		
There is tension between older and younger workers. <sup>R</sup>	.154**	.186**	.176**	.113*	.245**	<b>-.055</b>	.305**	.346**	.230**	.273**	.389**	.257**	

Items in bold indicate a negative correlation.

<sup>R</sup> Items with a negative connotation for older workers were reverse-coded.

\*p≤.05    \*\* p≤.01



I created an Attitudes toward Older Workers index based on the sum of items in this attitudes series. First I performed a reliability analysis based on eleven items (the original 13 minus the two problematic items). Cronbach's alpha for the index is 0.791. Table 4.9 outlines the effect of each item on the scale; there is no item that can be deleted to create a scale with a higher alpha than the 11-item total scale. The mean for the index is 31.77 (std. dev. 3.738), and the range of possible scores is 11-44 (range of actual scores is 17-44). Higher values on the index indicate a more positive attitude toward older workers. Despite some aforementioned country-level differences in some of the individual items that comprise the index, ANOVA testing revealed no significant country differences in the overall index.

Table 4.9. Cronbach's Alpha if deleted for individual items in 10-item worry index. N=402 respondents

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Can adapt to organizational change	28.85	12.011	.497	.770
Serve as mentors and teachers for younger workers	28.82	11.768	.412	.778
Are highly respected	28.90	11.786	.426	.777
Do not want to receive training <sup>R</sup>	28.93	11.876	.418	.777
Are too cautious <sup>R</sup>	28.98	11.632	.534	.765
Have trouble working long hours <sup>R</sup>	28.90	11.864	.425	.776
Are productive employees	28.61	12.119	.501	.771
Cannot adapt to new technology <sup>R</sup>	29.00	11.801	.346	.788
Are harder to train than younger workers <sup>R</sup>	29.00	11.010	.593	.757
Dislike taking instructions from younger workers <sup>R</sup>	29.14	11.885	.400	.779
There is tension between older and younger workers <sup>R</sup>	28.60	11.934	.414	.778

<sup>R</sup> Items with a negative connotation for older workers were reverse-coded.

I use this scale to explore the effect of firm age composition on attitudes toward older workers. For each firm, I calculated an Attitudes toward Older Workers (ATOW) firm score based on the average of worker ATOW scores; firm ATOW scores ranged from 27.67 to 35.20. I also assessed the age distribution of each firm. I initially ordered the firms by standard deviation, but this masked meaningful differences in age distribution. For example, a firm could appear more heterogeneous if there was an older worker within an otherwise concentrated, younger firm. Standard deviation-based age analysis also eliminated the opportunity to see if there were

dominant age groups. To capture these differences, I opted for a simple stem-and-leaf plot<sup>35</sup> for every company with more than 3 respondents to the age question, and hand-coded the distributions into categories: skew young (12 firms), middle age (6 firms), normal distribution (9 firms), and skew old (4 firms). These categories were based on age distribution patterns I observed from an overview of the data. If the age distribution of firms mattered for how age was perceived in the workplace, I expected firms that skewed young to score the lowest on the ATOW index, with middle age or normal distribution firms scoring in the middle and firms that skewed old having the highest values on the ATOW index (indicating the most positive views of older workers). To classify firms, I applied a similar system of checks that was applied to interview housekeeping codes: I took a ‘first-pass’ look at the data and assigned the distribution codes, which were then examined and confirmed in consultation with another study team member.

I grouped the firms by age distribution category, and then calculated the mean of firm ATOW scores by category. Table 4.10 presents the results. No clear pattern of age distribution and attitudes toward older workers emerges; the categories cluster tightly around 31-32 on the firm ATOW score (the mean individual ATOW score for all WANE web survey respondents is 31.77). Though firms that skew young had the lowest range of scores, they also had the highest. There is no clear correlation here to indicate that firm age distribution affects the attitudes toward older workers among respondents.

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<sup>35</sup> Stem and leaf plots are a very basic way to visualize descriptive data. It is an exploratory technique that is useful for small or medium data sets, where data are arrayed by tens, with the tens being represented as “stems” and the ones being represented as “leaves” (Tukey 1977). The stems are listed once for each set of tens, and followed by a decimal point or line and their corresponding leaves. For example, in case 113, there are seven respondents in the firm. Their ages are 24, 26, 35, 37, 43, 44, and 45 years old. In a stem and leaf plot, this would be represented as:

2.46  
3.57  
4.345

Table 4.10. Age distribution and attitudes toward older workers of WANE respondents by firm. (N=30 firms)

Age distribution category	N firms	Mean of firm ATOW scores <sup>†</sup>	Range of firm ATOW scores
Skew Young	12	31.807	27.67-35.20
Middle Aged	5	30.742	29.63-31.83
Normal Distribution	9	31.962	29.86-33.00
Skew Old	4	31.790	30.53-33.40

<sup>†</sup>Firm Attitudes Toward Older Workers score is calculated using the mean ATOW scores of individuals in each firm. The mean ATOW score for the overall sample is 31.77.

The quantitative data offers a good orienting view of the case study data on attitudes toward older workers. However, it is not yet clear what role structures play; it would appear that the influence of country is minor, as is the influence of age distribution in firms. There are some worrisome findings, including the perception by nearly a third of the group that older workers could not adapt to technology, and nearly one quarter of respondents who believe that older workers do not want to receive training. In a business that is based on technology and rapid innovation, these perceptions could be expected to cause some problems for older workers. Yet generally, the quantitative data describe a workforce that does not, for the most part, report a great deal of age discrimination. Why do we not see greater conflict? Is there some other component of age relations that mitigates conflict in this industry? Is there something about the nature of the labor process in these firms that influences how workers of different age groups relate to each other?

To answer these questions I focus my next analyses on the process of work itself; I turn to qualitative data to examine the language surrounding discussions of older and younger workers. I will be looking specifically to see how age is conceptualized and discussed by these respondents, and how older and younger workers are viewed in the context of the labor process and the firm structure.

### ***Qualitative Discourse about Age in the Workplace***

Interview data with firm employees revealed that age designations applied to both older and younger workers, and in many ways these attitudes mapped onto concepts from core LPT and the political economy perspective. Age designation was described by multiple respondents as a two-way street. One exemplary response came from a manager in his mid-thirties:

...from all ends of the spectrum, there probably are the, uh, the old guys probably think the new guys don't know anything and are too young to have done anything meaningful or, or what have you. And that's not, certainly not always true. Um, the young guys think that all the old guys, um, you know, are programming in an ancient language or something that they've never heard of or, you know, were used to using punch cards or something like that.

This response reflects some negative stereotypes about age and work that were echoed by others; other descriptions invoked about young workers included that they were lacking in judgment, rash, easily distracted by things that are 'cool,' unable to lead others, and obnoxious. Descriptions invoked about older workers included that they were difficult, slow, unfocused, and unwilling to learn (Marshall 2010). There were also positive stereotypes about the young as hard-working and driven, while the old were often seen as wise and steady. While these descriptions would be an interesting topic to explore in another analysis, for this investigation I focused on discussions that were related to LPT and political economy themes, which were plentiful. What emerged was a picture of skill expiration without development, pushes for worker speed and efficiency, strained relations between managers and underlings, and age accommodation through job sorting. I discuss each in turn.

### **Constant Improvements and Rapidly Expiring Skills**

Skills in this industry have a short shelf-life. The rapid pace of innovation in IT means that the value of experience is quite precarious; experience can, in essence, expire. This is predicted by the core labor process theory, as I have noted. LPT states that business will constantly revolutionize production to improve its margins, at the expense of the worker. This

interpretation of change in the workplace implies an intentional effort on the part of firm ownership to undermine its workers. Yet even if the ill-intentions are not obvious (or even necessarily present) among the owners and managers in IT, there is a constant cycle of change that is central to the way that IT does business. Programming languages have changed dramatically in the past few decades, and without further training and upskilling the workers who initially learned these older languages find themselves in a difficult position.

Yet few of the firms were committed to the type of on-going skill development that might help their employees stay atop of new technology trends (this finding is consistent with McMullin and Duerden Comeau, forthcoming). One respondent, a manager in his late forties, lamented the lack of investment in skill development among small companies and described the dilemmas that small companies faced:

And the problem is, is that, eh, so much businesses and small companies, they don't set aside time and money to invest back in people.... how do you justify setting a few hundred thousand dollars aside so everyone can go to school for a week. It costs us an enormous amount of money to recruit them, and when they're stale, we can't get rid of them and just hire new ones. And you can't expect them to all do it on their own when they're, when they're working fifty-two weeks a year on executing. And you certainly don't want them just doing it with old stuff.

Small businesses were in a difficult position, as noted by the respondent, given the relative expense of training. However, the workers were necessarily put into a difficult position in this example, unable to find extra time to learn on their own given the demands of the job.

Long hours were not uncommon among WANE respondents, which could seriously limit opportunities to improve skills on personal time. Without institutional support for upskilling, many older workers found themselves helplessly behind in terms of technology, as demonstrated by one 59 year old trying to make it through to retirement:

...I'm fifty-nine. I've got a lot of experience in a lot of things, but a lot of those things are basically gone and done. Yeah, I learned something and I still retain it, but it won't be useful again because nobody's using it.... So I have to be realistic that I don't have enough time yet to kind of start over in a new technology career and be competitive with a thirty-five year-old starting at the same time for half the salary.... I'm trying to learn a

few new things and extend the things that I know for another five or six years and then I'm done. So it's more, I'm in, I'm in kind of a survival mode and contribute and learn as much as I can that's appropriate, but am I gonna go back to college and get re-educated and whatever? It's not worth my time.

This respondent was part of a larger group of older workers who were under pressure to make things work in their current employment arrangements. Older workers often reported feelings of insecurity about their potential on the job market. One respondent in his late forties, a non-manager, offered a "realistic" assessment that upskilling on his own time was not worth it, as he was not likely to be hired anyways. He said, "I can go home and sit and, you know, be better off than to, you know, spend my time going back to learn something that when I get out nobody will hire you because you're too old. So I'm realistic about that."

Some of these market vulnerability fears were rooted in the expense of their salaries, and the low expense of younger workers. One noted, "As I've gotten older you realize if you know ah if I lose this job, I'm 49, it's gonna be harder for me to get a job because you can hire someone straight out of NC State who makes, not half, but you know, a fraction of what I make, and they're very good." Another respondent described his vulnerability if he should go out on the job market, as he would probably be considered too expensive to hire; he theorized that he would have to emphasize with potential employers that he was willing to work for \$60,000 or \$70,000 rather than the six-figures that his resume might command.

Some of these fears appeared to be well-founded. Asked to describe any age stereotypes prevalent in IT, one respondent, a manager in her mid-thirties, described his firm's hesitation when they encountered older applicants:

Um, the weird thing is, is that, well, I have to say that probably the thing that we've seen, is we get a little nervous if we interview older....Um, I think one, just off the bat, our initial reaction is they don't understand IT. You know, whereas, you know, everyone here has been doing it forever and since they were in diapers some people have been designing.

Older applicants were thought to have less authority on the technology, in part due to the rapid pace of change. There were also concerns about aging issues and length of commitment to the company, as described by another respondent:

...the guys that are doing the hiring are younger and younger and younger as you look in there and, which causes them some concern, I'm sure. Um, but I think just in general anybody even with, uh, with an older management team bringing in another older worker, uh, there is still the concern about does he have the skills, does he have the experience, how long is he going to be around, you know, what problems does he bring with him, whether that's either, technical or aging or whatever personal other things.

The difficulty that older workers face in hiring creates a difficult scenario for them at work. The older worker is in some ways trapped; their skills are not being developed as quickly as they are expiring, their salaries make them too expensive as new hires for other companies, and they are seen as damaged goods in the hiring market. In short, they have fewer alternatives, and great pressure to maintain current employment relationships.

### **Valorization and Age**

According to LPT, capital needs to control labor to generate support valorization (the production of surplus value in addition to use value). The extraction of surplus value from labor was seen as much more efficient in the case of younger workers, who were often described as able to work hard, fast, and cheaply; they were a great value to the company. Multiple respondents described it in ratios: you could get two "youngsters" for the price of one older worker. One older worker, a non-manager in his mid-forties, expressed a great deal of frustration with this logic, which he found to be short-sighted:

.... there is a general lack of value placed upon experience. Because there is, I believe that there is the perception that you can replace experience with twice as much immaturity. Two to one swap. You're this experienced person who values yourself this much. Here. Well, there's this person who's maybe half your age, maybe not. You know what? They value their experience half as much as you do, so guess what? I could get twice as many of them as one of you. But guess what? Stacking two nineteen year-olds on top of each other does not equal a thirty-eight year-old. It doesn't. You have two nineteen year-olds.

However, the young were seen as a good value by others. They were willing to work around the clock, very efficient, and often described in terms of their speed with coding and learning. This contrasted with older workers, who were seen as slow for a variety of reasons: diminishing mental or physical abilities, changing priorities, or a general laziness. As one respondent described it, herself a worker in her fifties, an older worker would “not [be] setting the world on fire anymore because you don’t feel like you need to.”

Older workers were also more difficult for management to control, and generally described as more resistant. Younger workers were generally more eager to please, and seen as go-getters. This contrast could create a disincentive for assembling a team that includes older workers. Another respondent in her fifties, a non-manager, described bosses who preferred to bring in younger workers because it was cheaper, but also because those workers were easier to control:

I think they want to be able to run the company the way they want to run it....People with experience ... I know when there’s bullshit being said to me. Or, pretty good at figuring it out. And I, I kind of, and, and you get I think to a point where you are willing to speak up and say, wait a minute. That’s bullshit. And, and you’re willing to do it. And I don’t think maybe you’re as willing to do it when you’re young. Or, or if you think of it as, you know, like, eh. You know, shrug it off. Yeah, it’s just a job or something like that. Whereas I think when you get older you’re more kind of willing to stand up and say, wait, wait, you’re not, you’re not handling this right, or I don’t think this is the fair way to do it. And I don’t think the management wants that particular outspokenness.

Management did not want challenges from older workers; in this company, the respondent estimated the management team to be in their forties. If the forties are the upper limit for age composition in a workforce, that age composition is going to be greatly limited.

### **Structured Antagonism and the Management Track**

Age and management were connected. Multiple respondents discussed the importance of ‘gray hair’ for decision-makers in the firm. The term ‘gray hair’ was used to describe sage insight, an extra dose of gravitas earned by years of experience. One respondent, a manager in his early fifties, described its use:



Um, there is, to some degree, a little bit of a mentality too, that people in certain positions need to have a certain amount of gray hair, and that's kind of a, a natural thing too that's talked about, you know. Um, even today there's things, you know, decisions that are made or something and, and somebody will say, yeah but, you know, he doesn't have enough gray hair to make that decision. Well, with the, you know, the understanding there is, the guy has, you know, walked down the path many times before. He knows what he's doing, versus somebody making that decision who hasn't ever been there before....

Gray hair was so important that one woman, in her mid-thirties in upper-level management, described hers with pride. She felt that her opportunities have improved as she grew older, and estimated that youth was a bigger liability than being female. The gray hair lent such credibility that she boasted about it:

.... But I'm older now too. It's one of the things, you know, I go to my hairdresser, I'm like, "Don't touch the grey hair. I've earned it." And it gets me a place at the table. Um, I, you know, I want to gray early (laughs) so I look older....

This respondent attributed many of the issues that led to the IT bust to the use of workers who were too young. The young were not capable managers, as they lacked the judgment and people skills to be effective; in her estimation, these young managers had driven the industry into the ground.

The young were generally not described in managerial terms. Rather, there was a management track, and several older workers described pressure to get on it. However, a few resisted, worrying that managers did not do 'real' work, that they were vulnerable to layoffs, and one even described managers as earning less than those who stayed on the technical track. Managers were described as outcasts of sorts, unable to do the technical work and not accepted as capable by those who did. One respondent, a manager in his early forties, described the situation as such:

....But there is sort of this notion that, you know, you come in to IT and you code and you're madly coding and you're pulling these all-nighters and at a certain point in time, you know, you need to start climbing this management tree, right? And then um, and then once you climb the management tree for a while then immediately comes the 'well, now you're a manager you don't know anything.' Right? IT people they go, 'Oh, he's in management he can't.' Once you haven't coded for a year well then, you probably don't

know how to code anything, you know. And so then you're perceived as, you're just a useless management weenie. And ah, never sort of accepted back into the true IT community. Now, it doesn't matter really how old you are when you make that progression, it's the making of that progression that that has that reaction, right. That you're, that you're not good in IT anymore.

Managers were described by many respondents in similar terms; they were incapable, out of touch, and uninterested in doing important work. To the extent that managerial status was equated with age, this could be quite problematic for older workers. Managerial status may in fact be one way that age is defined in this environment, which is similar to a finding by Marshall et al. (2005) that family status was used to designate old age in this sample (older workers are married, parents).

### **Age Accommodation through Job Sorting**

Finally, and related to the previous findings I've just described, though managerial status was not viewed positively by all, it was part of a larger strategy of age accommodations in the industry: job sorting by age category. As individuals aged they were expected to occupy different jobs in the industry. Sometimes these jobs were simply in management, which is logical given the increase in experience one gains when aging in an industry. However, sometimes individuals were expected to change departments entirely. We first encountered a discussion of this job sorting in an early key informant interview, performed with an industry leader:

...I mean right now I'm too old to code, I'm you know, I was too old to code by the time I hit mid-thirties. You know I used to be the best, but I'm just you know my brain, it's like the brain is like being an athlete's brain. You don't expect a 35 year old guy to go out there and run the 200 meters in the Olympics and win... I mean [Olympic runner] Justin Gatlin is what, 22? I don't know how old. But, he's at his peak now. He's gonna be really hard to do that again in four years and pretty much impossible to do it again in eight years and it's the same and it's the same way for this stuff. It's just like being an athlete.

He continued:

And so the question is what do we do with people like me who are you know over the hill technically? Well, some of us with communication skills or business skills will move into management and some with really good technical skills will move into technical

areas of management where they may be aren't doing the core algorithms, but they can manage the guys who are doing the core algorithms. Um, but, yeah I mean, if you've got people who are peaking at early 20s or earlier and you know hitting their stride as far as experience by mid-20s or if they go to grad school at maybe 30, you know, from 40 to, and the retirement age has got to go from 65 to 70 or more right? So, what do you with them from 40 to 70?

The respondent believed that there may be some decline in ability as workers aged, and it was natural for these workers to then move to different jobs that were more appropriate for their strengths (experience) while avoiding their weaknesses (an inability to keep up). The respondent further noted older workers tended to move into "customer relationship" work with jobs such as sales, marketing, or field engineering, or they moved into management. Those that did not move became "C and D players" and were then weak to layoffs.

The notion that individuals could become "too old to code" was one that we pursued with other interview respondents. It resonated with many, who often interpreted it in terms of not only ability, but also desire. Coding work was difficult work; it was the stuff of young people who had not only brainpower on their side and the physical ability to work long hours, but also the desire to keep up with technology and devote long hours to the job. It was the work of people who did not yet have children or other family distractions. One respondent, a manager in his late forties, described it thusly:

R: Well, it takes a lot to stay up on the latest and greatest of the code. And as you get older, things that consume your time as an adult, as a father, as a husband, differ. What it takes to stay current on code is demanding....I've moved away from that portion to the management, to the sales, to the marketing.

I: Do you see that happening with most?

R: Well, it just depends on their individual personalities and interests, I guess. But I can understand where people would become too old to code. It takes some energy, it takes some passion. Of course, if you've got passion, you can do almost anything anyway. But I'm more interested in the business aspects of it now than, than the coding, the neat ways of doing things. But I think a lot of that is partly due to the demands on my time.

The respondent noted that he himself had switched paths as his kids got older (around eight to ten years old), as his priorities shifted and he also needed to make more money to prepare for colleges.

Other older workers described being “tired” of staying up on the latest developments in the field or being less interested in the “grunt work”. One older worker, a manager in her early fifties, described a major shift in priorities:

I mean I know today at 52, I don't have as much, um, drive as I used to have you know, at 22 or 32. We're still getting the job done, but you're right. I mean our priorities are, “Gee, you know, I don't want to do this until I drop dead at the desk.” You know, I want to have some ‘me’ time, which is why I would like to get my job more manageable so it's a 40 to 45 hours a week and not on the weekends.

In short, the work that younger workers engaged in was very demanding, and not meant to be a permanent job. It was widely acknowledged that it could lead to burn out, and that it was not at the kind of pace that one could keep up indefinitely. While there was a part of the descriptions of job sorting that were abilities-based, there was an additional component about motivation; the respondents seemed to think that no one in their right mind would want to keep this kind of pace for long, and that the demands of the jobs held by the young were incompatible with family life. These sorting processes are a response to the structure of IT work, a way to maximize the knowledge of workers who are more familiar with new code while allowing workers whose knowledge is less relevant to technical work the opportunity to move into new roles. In essence, age designations in this industry related to skills (youth have more applicable skills, can learn more quickly, while older workers could perform jobs that required judgment and soft skills) and drive (youth would tolerate longer hours, older workers wanted to focus more on family and non-work pursuits) were accommodated by this job sorting. Sorting is meant to accommodate the perceived strengths of each age category.

In summary, the qualitative data demonstrated that workers both young and old are vulnerable in the labor process of the new economy. IT is an environment where skills expire

rapidly, as change is continuous and employers do not support upskilling. Older workers were in a particularly difficult position, as they had fewer alternatives should their employment relationships end. Young workers were described as cheaper and easier to control; this leaves them vulnerable to exploitative employment relationships. Age was related to management, but managers were described negatively as individuals who no longer did 'real' work. In this way the relationship between young and old could be related to a structured antagonism in the workplace. Yet there was an extent to which it was not entirely antagonistic; it was seen as a fact of working in the industry that younger workers were the workhorses performing advanced technical tasks, and older workers were more appropriately used for their soft skills. Many believed that this was a natural sorting, a way to accommodate changes in ability and motivation they perceived to come with age (old respondents also often echoed these themes, indicating that younger workers were not necessarily the only ones who ascribed these characteristics to older workers).

While the quantitative data present a more positive picture of age relations (the attitudes toward older workers are generally positive), this may in part reflect social desirability; when asked directly if older workers are worse than younger workers, most people would say no. Yet when asked to describe older and younger workers, more conflicted descriptions emerge. In this sense the qualitative data add new perspective to the quantitative findings.

## **DISCUSSION**

I noted before I began the data analysis that if the political economy and labor process theory are applicable to the study of age in the workplace, I expect to see evidence of age bias, and that discourse about age in the workplace will be described in terms related to the structure of the labor process itself. I found that there was some age bias, as some age designations were negative and some technology-related age biases were held by a sizeable enough population to be of concern. Yet ageism and age discrimination were not rampant, and in most instances they were not overt. This does not mean that age is not related at all to conflict in the workplace. To the

contrary, several conflict-oriented LPT theoretical underpinnings are particularly salient, including: worker skill disruption due to continuous technical advancement; surplus value production; capital's need to control workers; and structured antagonism at the workplace. The findings support the incorporation of the structural tenets of LPT and the political economy perspective into the study of age at work. However, there is evidence of age accommodation through job sorting, which may be tempering ageism and age discrimination in this workplace.

In descriptive analysis of the web survey, a portion of respondents in the web survey sample report discrimination experiences due to youth, and due to old age. Both young and old discrimination were reported to limit promotions, job access, and development opportunities, as well as lead to social exclusion. Additionally, youth discrimination was reported to lead to low pay. These findings establish that age bias against younger workers is an important issue, and the reports of underpay suggest that younger workers may be experiencing exploitation in the workforce. Additionally, there were worrisome indications that older workers are seen as less able to adapt to new technology or work longer hours – two skill sets that are often described as critical in this industry. Generally, country and age distribution of the firm did not have a clear relationship with attitudes toward older workers, so I focused my attention on the labor process and organization of work in these IT firms.

While the quantitative data provide an orienting view to age relations in the workplace, the qualitative data demonstrate the systemic issues that influence attitudes towards age. Interview data revealed that older and younger workers alike experienced ageism in ways that corresponded to LPT themes. The rapid pace of innovation in IT was part of a continuous development process that workers were not necessarily trained to keep up with. Small businesses were particularly vulnerable to financial pressures, and one way to save money was to forgo any efforts to engage in continuous skill development. Without incremental skill advancement, many older workers found themselves hopelessly behind on new technologies, the task of catching up

being quite daunting and unsupported by their employers. In fact, employers may even be hindering efforts to upskill; with great work intensity and long hours, some find themselves without the spare time to work on their own skill development. The system can allow skill lapses because younger workers actually arrive more qualified to address new technologies, and willing to work for less income. In this sense younger and older workers' interests are placed at odds.

Older workers on the market find themselves in a vulnerable position, for they are viewed as overly expensive without necessarily adding the same value as their younger counterparts. This leaves them in a vulnerable position with their employers as well, for they have fewer options in case of termination of the employment relationship. They may find themselves looking for positions that do not pay as well, or having to justify skill lapses, or unable to find anything at all.

While these results demonstrate a disadvantaged position for older workers, younger workers do not necessarily have it easy, either. Much of the discussion of younger workers suggests that their employment situation is actually quite exploitative; they are very efficient, work fast, and stay for very long hours, yet they are not compensated very well. While older workers are described as difficult or stubborn, younger workers are seen as more eager to please management. These findings all point to younger workers as easy contributors to production; they are easy for managers to control, and they very efficiently produce surplus value. In return for this commitment and added value, they are paid poorly, subject to round-the-clock demands, and placed on the path to skill degradation.

In respondents' estimations, one path to such degradation is the management track, as seen in their descriptions of managers in the structured antagonism section of the qualitative results. However, this is also an accommodation; managers are not seen as technically proficient, so to the extent that older workers are not viewed to be technically proficient, they make natural fits for these jobs. Age is equated with management in many descriptions, and advanced age is

seen as a prerequisite for effective performance in a management role. Effective management performance is differentiated from good work; according to some respondents, managers do not do real work, nor do they have an interest in working. They are alienated from other workers. As age and management go hand in hand, the structured antagonism of management relations creates a structured antagonism in age relations as well.

Yet the management track was one way that the industry accommodated older workers; in essence, some older workers reported that they had no desire to occupy the jobs that younger workers occupied, and they rather preferred jobs that were in management, or jobs that involved more customer relations such as sales. The difficult pace of ‘young’ jobs was widely recognized, as was its unsustainable nature and its incompatibility with family life. Yet there was little discussion of alternatives. Rather than adapt the jobs to accommodate the needs of the workers, workers were expected to adapt by cycling out into other work.

It can be asked, to what extent is this age accommodation just a convenient and fair way to organize labor in a capitalist system? Is it wrong to expect younger workers to put in their time – to pay their dues, so to speak – in expectation of being rewarded with better paying and slower paced jobs as they age? Is this not an efficient response to changes over the normative life course that maximizes the work situation for each worker? This is not the only industry where perceived age-based skill decline is accompanied by a normative career trajectory toward soft skill, experience-based jobs. One example of a similar trajectory can be found among sports professionals, where those in their early careers as players use skills and abilities that are not necessarily sustainable over a long period of time. After these skills and abilities begin to wane, those who wish to continue work in the field move to positions that utilize the expertise gained by experience (management, coaching, commentator work, etc.). This is also not the only workplace where high-demand early career jobs are followed by more civilly paced jobs. Similar statements can be made about many high-intensity professions as well, where perceived skill degradation



may not be as prevalent but where early-entry workers are expected to work with great vigor and then be rewarded with somewhat calmer work later: the legal profession, Wall Street, and even academia are but a few examples of industries that follow this model.

Yet in the WANE data, we see that this form of age accommodation is not without its disadvantages. As previously mentioned, this setup encourages younger workers' consent to some early-career work that could be seen as exploitative. Long hours and high work intensity are just things that early-career workers have to survive to make it to greener pastures; there is little pushback on the structure of these jobs or consideration of ways that they might be structured to make them more friendly to younger employees. Younger workers consent to this work intensity because it is temporary and part of the structure of the industry. Yet part of the deal is an implied payoff later in the career; however, this payoff is not guaranteed and may not be realized.

Workers noted that older individuals were at a disadvantage on the job market should they lose their jobs at the wrong time; in essence, older workers can be pushed out of the industry before they are able to make the transition to the more worker-friendly jobs. Additionally, assumptions about skill degradation are not always accurate, and may squander opportunities to engage older workers in more technical work if they desire to remain engaged with it. Finally, efforts to make these jobs friendlier across the lifespan might improve their appeal to a broader range of workers, diminishing the need for zero-drag workers and thereby increasing diversity.

The labor process theory was clearly applicable in these cases, as were the political economy perspective's assertions that group members occupy different locations and resources are unevenly distributed. Future study could actively pursue even more political economy topics. While some respondents alluded to early retirement packages in times of layoffs at larger firms, retirement was less a topic for discussion in these small, young firms. Education systems, welfare benefits, and other popular topics in the political economy perspective were discussed in WANE

interviews as well, though they did not necessarily overlap with discussions of age as often as labor process themes did.

## CONCLUSIONS

A growing body of work examines the status of older workers: how they experience work, what differences exist in hiring outcomes, ways that they get pushed into retirement or encouraged to stay. Older workers have been examined in many ways, and we know a great deal about differential experiences they have. Yet less is known about the processes surrounding these experiences. Why would we even expect different outcomes for older workers to begin with? Why does age matter in the workplace, if at all?

Heeding the call from Butler's 2005 retrospective on ageism and Marshall's 2007 elaboration on the need for an approach linking structures and individuals, I have examined ageism in the workplace using a broader, more structural approach. My approach was also inspired by the work of Roscigno and colleagues, who offered a great push forward in linking theory to ageism in the workplace, and by the structural emphases of political economists and labor process theorists such as McMullin and Marshall, who remind us that competing interests often lead to different resource, status, and power outcomes for different age groups in society.

### *Limitations*

The data I used in this analysis did have some selection biases. The overall sample is firm-based, and the collection of firms is country-based. This is not a random sample, and normal distribution cannot be presumed. As the analysis focuses on process, some labor process theorists would argue that the country is largely irrelevant. Not trusting, I did run random effects modeling and significance testing on descriptive statistics in the quantitative data, which revealed few statistical differences in the sample between countries. Still, while we can draw general lessons from this US-based analysis, it is important to note that differences in the political

economy of different countries may change outcomes. Though it is process-focused, future studies in labor process theory could examine differences in countries to confirm the universality of these processes in capitalism.

### ***Lessons Learned from Political Economists and Labor Process Theorists***

Roscigno et al. offer a social closure analysis that begins to demonstrate the issues of access and competing interests. However, their analysis is limited to legal materials, which are themselves vulnerable to selection bias. In the US legal context, age discrimination only matters when it happens to people over age 40. It must have an obvious negative consequence for the individual. While legal analyses offer insight, they cannot address some of the ageism and perceived discrimination that younger workers experience, and they cannot address more subtle forms of ageism and age discrimination that occur. These investigations also imply that old and young are active interest groups, with the young holding a disproportionate level of power.

A broader investigation, one which encompasses *all* attitudes towards age, both toward youth and toward old age, allows greater insight into the nature of age relations. The picture that emerges is far more nuanced than old-age-only studies can provide. By situating age in the labor process, it becomes clear that youth are not necessarily wielding great power over the aged; rather, all are interacting in a system that is characterized by conflicting interests which are more or less shaped by the labor process.

These conflicts occur in part because work is, to borrow a term from Edwards, contested terrain (Edwards 1979). As described by Thompson (1990), the labor process is one rooted in structural antagonism, the quest for valorization, the need to control workers, and continuous changes to the production process that leave workers in a vulnerable state. Collins and Acker have identified the ways that race and gender map onto this process, both influencing and being influenced by the production process. Labor process theory is also particularly applicable to these

issues (Jaros 2010); as a process-oriented analysis, qualitative data are particularly informative, and give greater insight than quantitative data alone can. Case studies are particularly appropriate instruments to pursue these themes (Marshall 1999; Thompson and Smith 2010).

Following these themes, it is clear that both youth and the aged fall prey to some negative aspects of the labor process. The youth are more vulnerable to exploitation in the valorization process; they are viewed to be quick, effective, and cheap. It is easy to extract surplus value from their labor. The aged fall prey to the continuous revolution in the production process, which is not accompanied by a commitment from capital to develop skills. They are pushed to management but this path can make them feel more vulnerable to layoffs, and alienate them from fellow workers. The sorting of jobs by age is an effort to accommodate age differences in the workplace, creating normal trajectories of career development that extract the maximum value from younger workers while allowing older workers to continue in the industry as they age and are no longer interested in the intensity of jobs geared to younger workers. Yet this arrangement allows the expectations of frantic pacing for younger workers to remain intact; rather than examine ways to make the job friendlier for all workers, everyone is expected to work to the hilt for several years, and then move off into management or calmer work as they lose interest. In this way consent to the process is maintained; no one ever complains about the pacing of these jobs, they just move on. In this sense age relations and conflict at work are tempered by age accommodation and job sorting. We may expect to find similar results in other high-intensity industries.

The experience of age at work is complex, and difficult to fully assess through examinations of the negative experiences of one age group. Rather, the greater context of age relations allows us insight into the underlying processes that may contribute to age designations. These are lessons that political economists and labor process theorists are particularly suited to impart. A contextualized approach to the study of age relations, both positive and negative, for ages both young and old, allows us to most effectively pursue these themes.

## **CHAPTER 5.**

### **THE IMPACT OF AGE RELATIONS AND THE NEW ECONOMY ON INFORMATION TECHNOLOGY WORKERS: DISCUSSION AND CONCLUSIONS**

#### **OVERVIEW OF RESEARCH INTENT AND METHODOLOGY**

As noted earlier, the experience of age at work has a new urgency in the modern economy, where an aging labor force is operating in an increasingly risky environment. Today's economy presents high levels of risk for workers, as firms increase their flexibility by shifting risks to employees (Cappelli et. al. 1997, Kalleberg 2009). The employees that I have examined work in high risk societies (which I have identified as Esping-Andersen's liberal welfare states) and in high risk firms (small, young firms) in an industry that is exemplary of the new economy: information technology. Like many other workers in today's economy, these workers have few protections from the life's uncertainties, such as poor health or loss of income. It is in this context that I examine age relations in the workforce, focusing on the broad question: does age matter in the new economy?

My key interests are the circumstances of workers in the new economy, the effects of social and political structures on their security and livelihood, and the influence of age on the work experience. I bring a theoretical toolkit to this endeavor, loaded with insights from the life course perspective, social psychology, and the political economy and labor process perspectives. The common theme between these perspectives is the importance of context: understanding work as a process that is embedded in historical time and place, influenced by social structures such as

policies, industry contexts, relationship to production, social structures of identity, and other structural forces that shape the work experience.

I analyze age relations in the context of small and medium new economy enterprises, where employees bear particularly high risks but also have the potential to reap great rewards. Jobs in this industry have many good features: they are typically well-paid, autonomous, and part of a major growth industry. However, these jobs can also feature work intensity and job instability, characteristics that are unappealing for some workers. As an industry, IT is overwhelmingly white, male, and young; minorities, women, and the old are out-groups who are vastly underrepresented. Yet as a growing source of middle class jobs, the homogeneity of the industry is worrisome.

The influence of gender, race and ethnicity, and age on the work experience has been a growing focus of political economists and labor process theorists, as I described in Chapter 1, though efforts to explicitly connect these perspectives to age relations at work are still not widespread (notable exceptions include the work of McMullin and Marshall 2001, and Roscigno et. al 2007). This dissertation adds to a small but growing body of work that makes that connection, and I further extend it to take a broader view of age relations. In this way I shift focus away from traditional concerns about ageist attitudes or searches for overt discrimination and toward an understanding of age as a sorting mechanism in the modern work environment. I examine age across the life course, focusing on age designations toward both young and old, and using qualitative analysis to allow for the relative nature of age assessments (the varying meanings that individuals attach to terms such as “old” and “young”). Additionally, I explore risk assumption strategies that firms and countries can employ to mitigate the impact of risk for workers (welfare state policies and firm practices).

Taken together, these chapters address macro level (political economy and welfare states), meso level (organizational human resource management practices and risk assumption), and micro level (labor processes) issues concerning risk, vulnerability, and age relations in the IT industry. My focus is the US, but I draw on international data when useful to provide comparison (as in the risk analysis by welfare states) or when pooled data provides a useful orientation to the themes of interest (as in the age relations analysis). Using a multilevel approach with mixed-methods case studies data, I address questions concerning employment relationships at these three levels. The analysis is framed around the following questions:

- What is the societal context in which these workers engage in paid work?
  - How does the risk experience of US workers compare to that of workers in other nations?
  - How do individuals perceive that risk?
- Can firms moderate the anxieties of their workers that are caused by their nations' welfare regimes?
  - How might the different contexts of risk affect human resource practices of firms?
- Does age meaningfully impact the experience of workers in new economy firms? Is this impact positive or negative (or both)?
  - Are age relations affected by structures related to political economy and labor process considerations?

Following the Chapter 2 overview of data and methods, Chapters 3 and 4 presented analytical findings regarding these questions. I will very briefly outline the findings in the next section. The findings illustrate two major themes regarding workers in the new economy that I next describe in greater detail: workers experience different anxieties based on protections offered by welfare state

policies and the business practices of the firms in which they work, and age relations at work are influenced by tensions surrounding the labor process.

In this chapter, I briefly summarize my findings, highlight new theoretical insights for the study of age and risk in the modern workplace, discuss the limitations of this study, suggest future directions for research, and discuss the implications for workers, employers, and policies in the modern, increasingly knowledge- and service-based economy.

## **DISCUSSION OF FINDINGS AND CONTRIBUTIONS**

Work and organization studies are often focused on large N, quantitative data sets. These studies are important, and fundamental for providing a general context and identifying patterns that are generalizable. However in this research I have taken a different approach, using case study data to examine processes, individual experiences, and firm-level practices that shape the reality in which workers today operate. This approach allowed me to focus on structures, but also on process and the meaning that individuals attach to work, risk, and age. I use a more inductive approach to generate theory. Both of my analytical chapters addressed issues that can increase the risk burden workers face in the new economy: the distribution of risk in society, and the impact of age structures on the aging US workforce.

My first analytical chapter (Chapter 3) describes how the risk environment in IT is perceived by employees, focusing on policies and structures in different welfare states that may help alleviate risk for individuals, and on policies and structures that firms can enact to alleviate risk for individuals as well. This chapter provides a toolkit for societies and firms seeking to alleviate risk for individuals; the alleviation of this risk can benefit all workers, and is one way to level the playing field for workers who have greater responsibilities for families or who do not have access to strong family networks or personal wealth should the employment relationship be severed. This is particularly helpful for older workers with family responsibilities.



### *Worries in a High-Risk Context*

An increasing risk burden for individuals is one of the most salient features of the modern economy. Therefore in Chapter 3 I focused on one manifestation of risk, individuals' worries and perceptions of stability, to establish the context of the age relations I study in Chapter 4. In Chapter 3, I explored the role of the welfare state and the firm in alleviating risk for workers in this high-risk context. I divided the four WANE countries into high liberal (Australia and the US) and low liberal (Canada and the UK) firms, building on Esping-Andersen (1990) but taking his typologies further to differentiate liberal welfare state types. I focus on two social policies that are the sources of the largest welfare state expenditures, health care insurance and pensions, which offer insight into the nature and breadth of the societal safety net that these workers can rely on should their employment relationships fail or their individual efforts to provide these expensive goods for themselves fall short. For this analysis I examined respondents' worries, which serve as a manifestation of perceived risk at the individual level.

Initial survey analyses showed little variation in specific worries or assessments of security and stability between respondents in different countries. Despite variations in their approach to social welfare, across the board, there were no significant differences between the countries on the overall worry scale. Yet while the quantitative data revealed few differences in the general experience or level of worry, the qualitative data demonstrated differences in the qualities of worry between the nations, and differences in worries at the firm level. In the interview data, the US workers appeared the most likely to maintain employment relationships because they were stable and offered health benefits even if the jobs were not completely satisfying, indicating their high dependence on employers for insulation from risk and the pressures they felt to maintain employment for these employer benefits. Employers in these countries had a great need to maintain insurance plans for their employees to reduce risk; while employers in Canada and the UK were able to offer more modest supplementary plans in their

packages, employers in the US had to provide expensive general health insurance plans. This is likely why the US respondents were the most likely to agree that their fringe benefits were good, and why they were so generally satisfied with their pay and income and investments. In a nation with such a narrow and focused safety net, these workers had a high level of employer-dependence as the employment relationship was more central to their general well-being than it was for respondents in other countries.

In high liberal states Australia and the US, employers could additionally instill stability through leadership charisma and the expression of a high commitment to maintain the employment relationship. These methods were mostly about reducing uncertainty; company owners and managers who demonstrated that they would keep employees in hard times or in spite of employee mistakes were able to remove the possibility of gaps in employment. In countries where the government did little to buffer workers from risk, removal of employer protections through termination of the employment relationship could be devastating.

These results demonstrated factors that contributed to how risk was perceived and the meaning that individuals attached to the employment relationship. Yet they did not explain why the overall risk levels among these respondents seemed to be so low, given the high risk-burdens individuals bear in this particular industry, and in liberal-types of welfare regimes. Why were these workers so unconcerned? To further explore ways that firms could reduce worries about risk, I performed a firm level analysis of the least worried case study firms across all four study countries, focusing on factors that firms could effect to make employees feel less worried. Communication about firm goals, values, and events appeared to allay employee worries. These firms were able to remove uncertainty by making it clear to employees what the state of the business was and in what direction it planned to go. This removes some element of surprise for employees, who know more about the firm status and can plan accordingly. Additionally, firms with strong growth patterns or stable niches were also represented across countries, once again

removing uncertainty; in these instances, the companies themselves were more stable than others, and this stability was perceived to extend to the employment relationship. Growth may not actually give a company stability; it requires a greater investment of capital and resources that can be difficult to sustain. Yet it signaled to employees that the firm would be adding rather than laying off, and that there was great potential for these small companies to morph into more sizeable enterprises.

In Chapter 3, I modified Esping-Andersen's (1990) welfare states model and its application for the study of risk. I note one procedural point: given the controversies surrounding the model, it is worrisome that so many studies use Esping-Andersen uncritically to sort countries for analysis, a criticism noted by Bambra (2007). Yet we need not abandon the model in its entirety. Rather, informed by Esping-Andersen's original categories and an examination of current policies of interest, modified categories can be employed. I found differences between countries within the liberal welfare states category, but sorting by low liberal and high liberal countries allowed me to move forward with analysis of risk in a particularly high risk industry. In short, grouping these four countries into one category would have masked real differences in how risk is perceived, and how this perception of risk affects the social psychology of work. By customizing the categories to fit the task at hand, an investigation of health care and pension risk, I was able to draw on the theoretical richness of Esping-Andersen's succinct typology while compensating for some of its shortcomings.

### ***Age and the Labor Process in a Young Workplace***

While Chapter 3 established the risk context of IT work and how firms could act to mitigate that risk for their employees, my next analytical chapter directly focused on the impact of age on the work experience. Inspired by Butler's (2005) challenges to the study of ageism, and following Marshall's (2007) elaboration, in Chapter 4 I sought to understand how social

structures surrounding the firm and work process influence ageism and perceived age discrimination. My work was also inspired by the work of Roscigno et al. (2007), whose application of social closure theory to age discrimination was a step forward for theories of workplace age relations. Yet I also argue that the experience of ageism and age discrimination against older workers is but one piece of a larger story of age relations at work. Rather than tell the tale of disadvantaged older workers, I sought to describe how the meaning of both youth and old age are put into play by this workforce: how youth and old age are defined, what meanings are attached to these social concepts, and how these meanings are related to the labor process. I used web survey data from WANE web surveys conducted in the four WANE study countries to provide a general overview of the state of age at work, and interview data from the US WANE cases to describe the meanings that were attached to age at work, both for the young and old. I specifically focused on how these meanings related to the structures of the labor process and political economy, drawing on insights from those theoretical traditions.

When I examined the interview data in this chapter, focusing on all age-related discussion rather than old age-specific discussion, I found further evidence that age attitudes are often shaped by the labor process and salient aspects of the political economy; young workers are often described in exploitative terms, and older workers are described as expensive and out-of-touch with the latest technical developments. In general the view of workers is that older workers are managers, younger workers are managed, and that young workers are inexpensive and fast, old workers are expensive and slow.

Yet there was also a theme of accommodation in some of these interviews: the young and the old did not necessarily want each others' jobs, and a normative career trajectory was in place that was organized by age and family status. This accommodation creates an environment where exploitation of younger workers is an accepted part of early career development. The normative, age-graded career trajectory makes the high-level intensity of early IT work seem appropriate as

part of a career-building narrative, and therefore makes it less likely that workers will protest the intensity or seek any change that might make these jobs more friendly to workers whose family responsibilities are not compatible with such intensity. Rather, workers are moved into management or sales as they age (or reach burnout), which are generally seen as slower paced; in this way, conflict about work intensity in this industry is diminished.

The issue of age relations in the workplace is often framed in terms of discrimination towards older workers, or the experiences of the old, as I described in Chapter 4. However, in reality ‘old’ as a term implies a baseline, a youthful counterpart against which to measure. In essence, when we describe older workers’ experiences, there is an implied contrast to the experiences of younger workers that is rarely, if ever, fully developed. Yet when I examined age across the spectrum, it was clear that younger workers were not necessarily experiencing unfettered dominance in the workplace. Rather, the structured antagonism of the workplace extends to age relations, as seniority systems and the value of experience place older workers and younger workers in different locations in the work hierarchy. In this sense labor process theory (LPT), as articulated by Thompson (1990), which I argue is a complementary approach to the political economy of aging perspective (Walker 1981, Estes et. al 1982, Minkler and Estes 1984, Minkler and Estes 1991) and which is already used for some gender and race research (Collins 2000, Durbin and Conley 2010), offers particularly valuable insight into the nature of the age experience at work. Clearly, LPT and political economy do not explain all age-related attitudes. Other factors were mentioned; though I focused on the labor process and political economy-related items, some interview respondents mentioned physical declines, laziness, or shifting priorities for the old, or lack of judgment, brashness, or naiveté for the young. This chapter extends the work of McMullin and Duerden Comeau (2011), who discuss the perceptions among WANE respondents that older workers are less trainable and less adaptable to new technology (also labor process issues). With respect to age in the workplace, it is beneficial to consider the

role of these process-oriented and economic issues, for they clearly have some implications and they are an important part of the work context.

Chapter 4 demonstrates that there is a relationship between the structures of the labor process and political economy on the experience of age at work, offering a description of work in these IT firms with a focus on age and how the labor process itself uses age as a way to organize work, how age groups define their identities relative to each other, and how age is related to systems of power in the workplace. The workplace tempers conflict with a normative, age-graded career trajectory that can be seen as an age accommodation. As a procedural note in this chapter, by broadening the analysis away from a specifically old-age, negative-attitudes focus (the traditional ageism and age discrimination focus) and instead investigating age relations both positive and negative across the age spectrum, a larger theoretical narrative emerged. Age relations influenced and were influenced by the organization of work itself.

## **INTEGRATED DISCUSSION**

Two surprising results emerged from this study. The first involves the risk context of the WANE workers, and the second involves age relations.

To begin, the WANE respondents are all working in high-risk contexts: they are all located in liberal social welfare environments, at a historical time when employers are less willing to shoulder risks for their employees, in small and medium firms that are young and for that reason could be seen as somewhat vulnerable. These pressures are even greater, in theory, for US workers, who have few state benefits they can depend upon should their employment relationships terminate. If they find themselves out of work they may also be out of luck as they are in an industry where skills rapidly expire, but also in firms where training is not a priority.

Yet survey data demonstrate that the respondents are, for the most part, fairly unconcerned about their security and stability. So why aren't they worried? And why aren't US workers, who have the fewest state protections, the most worried of all?

Secondly, the WANE workers are in an industry where age can be related to skills – the exposure to technology has a generational component, and the type of work that IT workers do can become physically and mentally tiresome after a few years. As a demographically young industry, it would seem likely that ageism and age discrimination could be quite problematic. Yet while there were some sources of concern, generally the attitudes toward older workers were fairly positive among survey respondents. A sizeable group even reported that their supervisors were actually younger than they were, hinting that this may be an industry where age does not have a great impact on promotion. Could it be that IT is an industry where age does not matter?

Taken as a whole, we have counterintuitive survey findings. What is so special about IT that its workers appear to feel little risk despite their high exposure to risk, and little ageism despite the youthful demographics of the industry and the relationship between age and skill sets? It appears that in both instances, there are intervening factors that moderate the effects of the factors of interest.

Regarding the exposure to risk, it appears that country context does not affect individual perceptions of worry. Rather, it is possible that IT, as a globalized industry, has some universal standards for its workers. They almost all receive healthcare from some source, and many have other benefits such as pensions as well. It is likely that the US workers do not feel at-risk because their employers are elevating their benefits levels to match a globalized market, or a globalized ideal of what standards IT workers can expect. This led US interview respondents to describe greater pressures to maintain their employment relationships, and for good reason – they were quite dependent on their employers for their welfare. This is heartening for US IT workers, who

have extra protection in an uncertain context. Yet the arrangement creates expense for US firms who must compete to sell their wares in an increasingly global market, where workers in other nations require less of their firms for stability.

Regarding ageism, it appears that age does matter. Age is a sorting mechanism that employers use to organize their employees and the division of labor. Yet age is also related to accommodations. Interview respondents describe divisions of labor along age lines as appropriate, with younger workers establishing themselves through highly technical work that is demanding from a physical, mental, and time-use perspective while older workers shift to more soft-skill-oriented work such as management and sales. In a sense, these accommodations are seen as playing to the strengths of each life phase, and they remove some of the pressures that might otherwise surround age relationships in this workplace.

## CONCLUSIONS

Though it has its limitations, which I will discuss momentarily, this research allows me to draw several conclusions regarding age relations at work in the new economy. I find the following:

1. *The US, as a high liberal regime, does not shoulder a great deal of individual risk burden at the state level. Rather, these risks are left to employers and individuals to resolve. This creates a situation of high employer-dependence for US IT workers, and a high burden for US IT employers. At the time of the WANE study employers were meeting this demand, but US workers are in a precarious position.*

Although quantitative data appear to demonstrate only minor differences in how workers in different societies experience risk, the discourse surrounding risk demonstrates that risk is experienced in different ways that can be influenced by both the society and the firm. For example, workers in high liberal US and low liberal Canada express few major differences in



their survey assessment of worry. Yet in interview data, it is clear that there are differences in how that worry is experienced; US workers are under greater pressure to maintain employment relationships that offer basic health insurance, while Canadian workers have a broader safety net and are more concerned with supplementary policies. In firms with the lowest worry index scores, respondents were knowledgeable about the future of the firm and the firm's commitment to maintain the employment relationship. Individuals are exposed to risk differently in these different nations and firms, and in keeping with the social psychology perspective, they must then navigate this risk and adjust their life courses in ways that respond to it (for example, by maintaining employment relationships that are otherwise unsatisfactory).

2. *Age is a sorting mechanism in the IT workplace: it shapes the work experience, attitudes of colleagues and supervisors, and notions of natural career trajectories. The effect is not limited to older workers and negative attitudes. Both the young and the old experience attitudes that can be interpreted as positive, and those that can be interpreted as negative.*

Labor process theory and the political economy perspective are both valuable tools for understanding this dynamic, as age designations were not limited to older workers but directed toward young workers as well, and related to conflict at work. However, age accommodations temper this conflict, thereby reducing opportunities to improve work in this field.

### ***Limitations and Future Research***

In each analytical chapter I outlined some of the limitations of these analyses, which boiled down to two major issues: the generalizability of the WANE data, and the role of historical time. The WANE study offers very rich, contextualized data that are particularly useful for examining new economy work. However, it is not possible to generalize this data to a wider population, as the population of case studies is not a random sample. Though the data are cross-

national, they are situated in certain firms and certain geographic regions. However, by using a consistent interpretive framework it is possible to generalize the theoretical insights more broadly (Marshall 1999). This was done in both the data collection and preliminary analysis phases of the research, as the international WANE team applied a life course approach in the creation of instruments and in the collection of interview data. This is why I also documented my own major theoretical influences at the outset of this work: I drew on elements of the life course, political economy and labor process theory, and social psychology perspectives to maintain consistency across sites. Though the generalizability is not perfect, the depth of context allowed me to perform analyses of processes, to use an approach that illuminated alternate contributing factors, and to study firm-level issues that are difficult to tease out of larger N studies. Future work could test these theories using larger data sets, or use some of these qualitative findings to develop quantitative instruments to follow up on the results. These WANE data are also particularly well-suited to investigate meaning, which was a major focus of my work. I was able to explore meanings individuals attach to work, how they interpret worry and risk, and how age is conceptualized in IT.

Inspired by life course theorists, I also note the role of historical time and place in this data collection. As noted in Chapter 1, the study countries were all advanced economies, and the data collection took place between 2004 and 2006. This was a period of recovery for the IT industry, having recently been through a major boom and bust cycle. This has implications for both the firms that are in the IT industry, and the individuals. The firms in the WANE sample had all formed after, or survived through, the bust cycle. The IT firms that made it through that process or formed after may be hardier than firms from other industries, and this can affect how these results are interpreted. This can affect the business practices they model, or may even indicate that these firms are hardier than others.

### ***Where They Stand: Workers in the New Economy***

It can be hard to feel badly for IT workers. Overwhelmingly young, white, and male, few occupy statuses traditionally viewed as disadvantaged. For the most part, their salaries afford comfortable lifestyles compared to other service workers. However, they do operate with great instability, and are often subjected to great work intensity. The industry can be hard on old and young alike. IT work demands a great deal from younger workers, without offering attendant job security or opportunities for upskilling. As workers age and find their skills expired, they become unhirable or increasingly dependent on their current employers for their well-being. There are plenty of factors that recommend IT work, but also plenty of disadvantages to it. These are the middle class jobs of today.

Despite the limitations, this research offers a window into the experience of workers in a major growth industry of the 21<sup>st</sup> century. Classic work studies such as those outlined in Chapter 1 examined work in industry; we have learned a great deal about the employment relationship in factories from many sources, including studies of Fordism and Taylorism, studies of work in Japan, studies of high performance work organizations, and much of the scholarship that came out of Bravermania and labor process theory. These studies were important because these jobs represented the middle class; they were jobs that individuals could enter without college degrees, and work their way up through a firm internal labor market that invested in the development of, and care for, the employees. Were these jobs ever available to diverse employees? No. They have always favored white men over others. But they represent the baseline of positive work relations against which modern relations are measured, a golden era where workers had greater powers, unions had meaningful influence, and employers made career-length commitments to their employees. Many of our current policies assume this sort of employer-dependence, where firms provided for the welfare of their employees.

This sort of arrangement seems dated today, an artifact of happier times after World War II (Kalleberg 2009). As the rich become richer and the poor become poorer, and high college tuition makes advanced education unattainable for so many, IT offers a path to the middle class that is not always dependent on an advanced degree. The lessons of the factory can be applied, within limits, to these jobs; labor process theory itself arises from Braverman's influential work (Braverman 1974), and offers lessons that resonate. Yet there are unique issues as well; in a factory, it is clearer who is the employee and who is an owner or agent of capital. In some of these new economy firms, the hierarchy is so flat that the interest groups are harder to identify. That does not mean that they are not there; rather, there is more work to do sorting out what the power dynamics are in these firms, who is in charge, how teams can become oppressive, and what it means to be a part of the ownership structure. In short, there is a lot of work to be done to fully appraise these work environments.

There also remains more work to be done to figure out how to improve the lots of these workers. The obvious solution is to increase social and economic supports for all citizens, as we see in Canada; these workers are not necessarily paid as well as US workers, but they are also much less vulnerable should they experience unexpected gaps in employment or health crises because of factors such as universal healthcare and longer and more generous benefits such as unemployment insurance. Yet recent debate on healthcare reform in the US demonstrated the unlikelihood of major increases in social welfare spending anytime soon. In a job market with record unemployment, where it is estimated that between one tenth and one fifth of workers are experiencing unemployment or underemployment, most US citizens should be realizing how vulnerable they are. However, resistance to universal plans remains quite high. Without support for more extensive universal programs, workers in low liberal states like the US will remain tied to the whims of the market, and employers who wish to provide some stability for their workers will face increasing costs as the population ages and healthcare costs rise.

As we begin to emerge from the recession of the last several years, the experience of IT workers is instructive. During the study years of 2004-2006 the industry was experiencing a recovery, which did not bring it back to its bubble highs, but rather to a more modest model of stability. Pay in these companies was usually good if not exceptional; the fringe benefits such as game tables and basketball hoops were scaled back or eliminated. Companies were able to make the workers feel less worried by communicating effectively, demonstrating commitment to keep the team together, and pushing for careful growth or operation in a niche market. These lessons may be applicable to all countries as we begin the second decade of the new millennium in a shaky and slow economic recovery.

In a high-risk society, work in a high-risk industry offers opportunities for pay, autonomy, and growth potential to those workers who choose to assume the risk. Understanding the experiences of workers who do not fit the typical profile of young male IT workers, and who we would not ordinarily expect to display high risk tolerance, sheds light on those factors leading to the homogeneity of this workforce. Worker interactions, hiring processes, and public and private benefits programs are critical to this understanding; each illustrates opportunities to improve structures and systems to encourage and maintain diversity in this growth industry.

## **Appendix A. Country-specific policies on health care and retirement: US, Australia, Canada, and the UK.**

### *The United States*

The US was the only country not to cover 100% of its citizens with public healthcare insurance; rather, 57.9% of US citizens had primary private coverage and 27.4% had public coverage, by far the lowest public coverage rate of any OECD nation (the next runner-up, Turkey, has public coverage for 67.2% of its citizens). Coverage is limited to the impoverished and elderly. Along with Turkey and Mexico, it is one of the 3 out of 30 OECD nations to not offer universal healthcare (OECD 2009).

Just ahead of Australia, the US has the fifth highest old-age poverty rate, in part because of its limited public benefits (OECD 2009c). Of the four nations, the US pension system is probably the most complicated in its sourcing and calculations. Public benefits include the earnings-related benefits of social security, and the supplemental security income, a targeted, means-tested net for low-income seniors. To qualify for public benefits, the normal retirement age in the US currently stands at 66, and is incrementally increasing over time to a planned normal retirement age of 67 by 2022. Early retirement is possible after age 62, with social security benefits reduced by  $6\frac{2}{3}\%$  for each year before 66. For individuals who defer retirement, there is a social security benefit of 7.5-8% for each year deferred up to age 70 (OECD 2009c).

Social security benefits are progressive, based on a career average for the top 35 years of income, with years before age 60 readjusted. Years where earnings were zero are included if needed to reach 35 years. Time out of the workforce is only removed from benefits computation for individuals who become disabled at a young age, so there is no specific protection for periods of unemployment or absence from the workforce for childcare. The benefit is calculated at age 62, and then indexed to prices with the following bands based on average monthly income:

- \$0 - \$656: 90% replacement
- \$656 - \$3955: 32% replacement
- \$3956 – earnings ceiling (currently \$7700, or 239% of average earnings): 15% replacement

Private pensions and other investments account for 44% of retirement incomes in the US (OECD 2009c).

### *Australia*

Australia has a universal public health benefit, and also one of the largest supplemental private insurance markets for healthcare benefits in the OECD, covering 44% of citizens. This duplicate coverage market provides faster access to services than the public benefit (OECD 2009). Poverty among seniors is a serious issue in Australia: in the mid-2000s its senior poverty level was the fourth highest among the 30 OECD member countries, with 27% of the population over age 65 having incomes below half of median household income (OECD 2009c).

The pension benefits system in Australia consists of two mechanisms: defined contributions through the superannuation guarantee, and targeted means-test through the Age Pension. As part of the superannuation guarantee, employers are required to contribute 9% of employee earnings to a private pension plan for employees up to age 70, with exclusions for workers earning less than AUD 450/month, and mandatory contributions capped at AUD 33,720 for the 2005-2006 time period (the limit is indexed to about 250% of average earnings). These funds are available for those who retire at or after age 55. As they are privately run, withdrawal schemes vary; some employees are on defined-benefit schemes, but most are on defined-contribution and can withdraw their pensions as income or in a lump sum. There are no protections for periods of unemployment or absence from the workforce for childcare (OECD 2009c).

The Age Pension is the state plan and offers a safety net targeted for those at the bottom income levels. It is indexed to the Consumer Price Index, and further adjusted, if necessary, to

prevent individuals from falling below 25% of average gross male total weekly earnings. To qualify for Age Pension, men must retire at or above age 65, and women must retire at or above age 63 (the female age will be adjusted up to 65 by 2014), with a graduated deferment bonus paid in lump sum for those who delay retirement up to five years. Early retirement benefits are not possible with the Age Pension (OECD 2009c).

### *Canada*

Canada has universal public healthcare coverage, with a sizeable supplementary private insurance market that covers 67% of the population for pharmaceutical drugs and dental not covered by the public system (OECD 2009).

Canada has the fifth lowest senior poverty rates among OECD countries, with fewer than 5% of seniors over age 65 having income below half the median household income (OECD 2009c). Canadian pensions are provided through a basic old age security (OAS) pension, an earnings-related Canada Pension Plan or Quebec Pension Plan (CPP/QPP), a targeted guaranteed income supplement (GIS), and voluntary private pensions. The OAS pension is guaranteed for anyone over age 65 who has been a Canadian resident for ten years. A maximum pension is indexed to prices, and then residents are given 1/40<sup>th</sup> of this maximum pension for each year of Canadian residence after 18, up to 40 years. Earnings-related CPP and QPP plans target 25% of individual earnings for average lifetime salary (calculated based on the 85% most lucrative career years, and a revaluation of earlier years based on economy-wide earnings, with exclusions for years of caring for children under age 7). Participation is mandatory for individuals earning over CAD \$3,500/year, with a ceiling indexed to average earnings (in 2006, the ceiling was CAD \$42,100). The normal retirement age for CPP/QPP is 65, but it can begin at age 60 with a reduction of 6% per early year, or deferred up to age 70 with a 6% increase per year deferred. For individuals whose OAS, CPP/QPP, and voluntary programs combined still fall below the poverty line, the GIS is added. It is price-indexed and reduced at a 50% rate against income other than



OAS. In 2006, the full pension level for OAS was CAD \$5,846, and combined with the GIS the maximum benefit was CAD \$13,011. The OAS and GIS begin automatic payout at age 65 and cannot be instated earlier or later (OECD 2009c). Together, these benefits provide an expansive safety net, as evidenced by the remarkably low level of senior poverty in the nation (OECD 2009c).

Voluntary plans include personal and occupational plans, and cover about 57% of Canadian employees. Private pensions and other investments account for 41% of retirement incomes, also quite high compared to the OECD average of 20% (OECD 2009c).

### ***The United Kingdom***

The UK has universal health coverage, and only a modest supplementary private insurance market (11.1% population covered) (OECD 2009).

Among OECD countries, the UK has the highest percentage of retirement income from voluntary private pensions, and public pensions there provide the lowest pensions relative to individual earnings for the average earner. The UK senior poverty level is in the middle of the pack of OECD countries, about the 16<sup>th</sup> lowest (out of 30). The recent Pensions Act of 2007 changed a few of the policies, so I will report the current and previous levels. There are four pension types: basic state pension, targeted Pension Credit for low income seniors, earnings-related pensions, and voluntary private pensions. State pensions are currently available for women age 60 or higher, and men age 65 or higher, with a planned equalization to age 65 for both genders by 2020, and planned increases in retirement age up to age 68 by 2046 (OECD 2009c). Prior to 2005 it was possible to defer retirement up to five years with a deferment bonus of 7.4% per year; in 2005 the policy was changed to remove the limit on years of deferment and increase the bonus to 10.4% annually, which may be taken in a lump sum (OECD 2009c).

To qualify for full basic pension, a worker needs to have paid social security contributions or have credits for nine tenths of their potential work lives – previously 39 years for women and 44 years for men, though the policy has been changed to 30 years as of 2010. A proportionally reduced basic pension is available for individuals who have worked at least 1 year (this was recently changed from a previous minimum of 10 years for women and 11 years for men). The basic pension provides a flat rate. In 2006-7, the rate was GBP 84.25 per week, or about 14% of average earnings. Years providing care for at least one child under the age of 16 are protected, whether the individual was out of the workforce or working for less pay than the lower earnings limit, and can reduce the number of years required for full basic pension as low as 20. Periods of unemployment are also credited for the basic plan, though not the earnings-related plan (OECD 2009c).

In the earnings-related state pensions, benefits are price-indexed and calculated based on average lifetime earnings, with earlier years adjusted to average economy-wide earnings. Additionally, years spent caring for a child under age 6 can be calculated at the lower earnings threshold. There are currently two bands: for lower income workers (between the lower earnings limit or about 14% of average earnings, and low earnings threshold or 40% of average earnings), pension will be at 40% replacement of the difference. The remaining pensions are compensated at 10% replacement of earnings between the low earnings threshold and the ceiling (about 109% of average earnings) with a cap on accruals. Prior to 2010 there were three bands: the lower earnings limit to low earnings threshold was the same, but there was a middle threshold up to 91% of average earnings that had a replacement rate of 20% (OECD 2009c).

The Pension Credit plan is two-pronged; the guarantee credit ensures that all individuals age 60 or over meet a standard minimum level of income, while the savings credit boosts the incomes of those who have saved some but are still under the guarantee credit minimum (OECD 2009c).

## **Appendix B. WANE web survey items used in Chapters 3 and 4**

Items are presented in the order that they appear in the chapter. I have omitted descriptive questions such as age, sex, years of education, etc. I have presented the items as they appeared to US respondents, though the web survey was tailored so that respondents in other countries had equivalent terms (e.g. British English spelling for non-US respondents). Items are presented in the order they appear in the chapters.

### ***Chapter 3***

*The following items had response categories of 1=Not at all important, 2=A little important, 3=Somewhat important, and 4=Very important.*

The following are various aspects of jobs. How important do you personally consider these job characteristics?

- Q22d. Good pay
- Q22f. Good job security
- Q22h. Good fringe benefits

*The following items had response categories of 1=Strongly disagree, 2=Disagree, 3=Agree, and 4=Strongly agree.*

Q77. Please indicate the extent to which you agree or disagree with the following:

- Q77a. My pay is good.
- Q77b. The fringe benefits in my job are good.
- Q77c. My job security is good.

Q25h. Overall, I am satisfied with what I do in my job.

Q77h. Overall, I am satisfied with my career progress.

*The following items had response categories of 1=Very poorly, 2=Not very well, 3=Adequately, and 4=Very well.*

- Q127. In general, how well do your income and investments satisfy your current needs?
- Q128. Looking to your future, how well do you think your income and investments will continue to satisfy your needs?

Q129. In the past five years, have your expectations about your future financial security changed?

- 1. I have lowered my expectations.
- 2. No change.
- 3. I have raised my expectations

*The following items had response categories of 1=Not at all, 2=Somewhat, 3=Quite a bit, and 4=A great deal.*

Q126. As you look to your future, how much do you worry about the following factors?

- Q126a. Future economic success of the company you work for
- Q126b. Future of IT industry
- Q126c. Offshoring of IT jobs to other countries
- Q126d. Your ability to be competitive in the job market should you lose your job
- Q126e. Failing to keep your IT knowledge and skills current
- Q126f. State of the economy in general
- Q126g. Your health
- Q126h. Health of family members
- Q126i. Juggling work and family/personal life
- Q126j. International stability

#### ***Chapter 4***

Q6. Do you supervise (manage) other people in your CURRENT JOB?

- 1 Yes
- 2 No

Q105. Approximately how old is your immediate supervisor?

- 1 In their 20s
- 2 In their 30s
- 3 In their 40s
- 4 In their 50s
- 5 In their 60s
- 6 In their 70s

*Respondents were asked if they had experienced discrimination in their current employment (q81) and previous employment (q83). Aside from the prompt for the prior or current job, these items were otherwise identical. I have provided Q81 as an example. Response categories were 1=Yes, favorably, 2=Yes, unfavorably, and 3=No.*

Q81. Has your treatment in your CURRENT JOB ever been affected favorably or unfavorably by your...

- Q81a. Race or Ethnicity
- Q81b. Sex
- Q81c. Being considered too young
- Q81d. Being considered too old
- Q81e. Mental or physical disability
- Q81f. National or ethnic origin
- Q81g. Family responsibilities
- Q81h. Sexual orientation
- Q81i. Criminal conviction

Q81j. Religion or religious beliefs

*The following questions were asked for each item in Q81 and Q83 where the respondents reported favorable discrimination. The following example uses Q81a, race and ethnicity. Response categories were 1=Yes, and 2=No.*

In which of the following ways were you treated favorably due to your RACE OR ETHNICITY?

- Q82a1a. Interviewed or hired for other jobs at your company
- Q82a1b. Promoted
- Q82a1c. Given a good performance evaluation
- Q82a1d. Given job training or development
- Q82a1e. Paid more for the same work
- Q82a1f. Included in work activities
- Q82a1g. Included in social activities
- Q82a1h. Other (Open response)

*The following questions were asked for each item in Q81 and Q83 where the respondents reported unfavorable discrimination. The following example uses Q81a, race and ethnicity. Response categories were 1=Yes, and 2=No.*

In which of the following ways were you treated unfavorably due to your RACE OR ETHNICITY?

- Q82b1a. Not interviewed or hired for other jobs at your company
- Q82b1b. Not promoted or assigned certain jobs
- Q82b1c. Given a poor performance evaluation
- Q82b1d. Demoted
- Q82b1e. Not given job training or development
- Q82b1f. Paid less for the same work
- Q82b1g. Felt pressure to leave this job
- Q82b1h. Made to feel left out
- Q82b1i. Excluded from work activities
- Q82b1j. Excluded from social activities
- Q82b1k. Harassment (e.g. an act of intimidation or threat that demeans, belittles, or causes persons humiliation or embarrassment)
- Q82b1l. Other (Open response)

*The following items had response categories of 1=Strongly disagree, 2=Disagree, 3=Agree, and 4=Strongly agree.*

Thinking about the OLDER people with whom you work, please indicate the extent to which you agree or disagree with each of the following statements.

- Q79a. Can adapt to organizational change.
- Q79b. Serve as mentors and teachers for younger workers.
- Q79c. Are highly respected.
- Q79d. Do not want to receive training.
- Q79e. Are too cautious.
- Q79f. Are more reliable than younger workers.

- Q79g. Have trouble working long hours.
- Q79h. Are productive employees.
- Q79i. Cannot adapt to new technology.
- Q79j. Are harder to train than younger workers.
- Q79k. Dislike taking instructions from younger workers.
- Q79l. Are less likely to be promoted.
- Q79m. There is tension between younger and older workers.

Q80. When you answered the previous questions were you thinking of older workers who were:  
(Select all that apply)

- 1      In their 20s
- 2      In their 30s
- 3      In their 40s
- 4      In their 50s
- 5      In their 60s
- 6      In their 70s

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