

DISABILITY, EMPLOYMENT AND ECONOMIC SURVIVAL

By

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TABLE OF CONTENTS

Curriculum Vitae.....	p. iv
Acknowledgements.....	p. x
Table of Contents.....	p. xi
List of Tables.....	p. xii
List of Figures.....	p. xiv
Introduction.....	p. 1
Historical Background, Literature Review and Hypotheses.....	p. 18
Data and Methods.....	p. 53
Who Works and How Do They Compare?.....	p. 76
The Impacts of Social Change on Employment.....	p. 90
Economic Survival and Material Hardship.....	p. 106
Mechanisms of Disability Labor Market Inequality and Experiences of Discrimination.....	p. 123
Discussion and Conclusion.....	p. 149
Works Cited.....	p. 164
Appendix.....	p. 172

LIST OF TABLES

Table 3.1 SSA Disability Type Definition.....	p. 63
Table 4.1 Distribution of Population Characteristics by Disability Status	p. 77
Table 4.2 Binary Logistic Regressions Predicting Employment.....	p. 79
Table 4.3 Selected Net Effects of Disability Interactions from Binary Logistic Regression Models Predicting Employment.....	p. 83
Table 4.4 OLS and HLM Estimates of the Disability Wage Gap for Full-Time Workers.....	p. 85
Table 4.5 Summary of Hypotheses Tested.....	p. 89
Table 5.1 Distribution of Population Characteristics by Disability Status.....	p. 96
Table 5.2 Results of Binary Logistic Regression Models Predicting Employment....	p. 98
Table 5.3 Summary of Hypotheses Tested.....	p. 105
Table 6.1 Total Personal and Household Monthly Income by Disability and Employment Status for Adults 25-64: 1996, 2001, and 2004 Survey of Income and Program Participation Panels.....	p. 109
Table 6.2 Distribution of Material Hardship by Disability Status for Jobless Adults and Employment Status for Adults with Disabilities: 1996, 2001, and 2004 Surveys of Income and Program Participation.....	p. 112
Table 6.3 Distribution of Population Characteristics by Disability and Employment Status for Americans Age 25-64.....	p. 115
Table 6.4a Receipt and Amount of Unearned Income by Source and Selected Characteristics for Jobless Adults with Disabilities Age 25-64: 1996, 2001, and 2004 Surveys of Income and Program Participation Panels.....	p. 118
Table 6.4b Receipt and Amount of Unearned Income by Source and Selected Characteristics for Jobless Adults without Disabilities Age 25-64: 1996, 2001, And 2004 Survey of Income and Program Participation Panels.....	p. 119

Table 7.1 Summary of Hypotheses Tested.....	p. 147
Table A.1 Occupational Cross-walk for the 1996, 2001, and 2004 Surveys of Income and Program Participation.....	p. 172

LIST OF FIGURES

Figure 1.1 Employment and At Least Some College Education for People with Disabilities Aged 18-50, 1988-2008.....	p. 3
Figure 4.1 Regression of Within-Occupation Disability Earnings Inequality on Mean Occupation-Specific Logged Earnings for Full-Time Workers without Disabilities.....	p. 88
Figure 5.1 Percent of U.S. Men and Women Employed by Disability Status, 1969-2006.....	p. 91
Figure 5.2 Percent of U.S. Men and Women Employed by Disability Status for Selected Birth Cohorts, 1969-2006.....	p. 92
Figure 5.3a Distribution of Educational Attainment for People with Disabilities.....	p. 93
Age 25-64, 1969-2006	
Figure 5.3b Distribution of Educational Attainment for People without.....	p. 93
Disabilities Age 25-64, 1969-2006	
Figure 5.4a Distribution of Educational Attainment for People with Disabilities.....	p. 94
Age 25-64, Born Between 1905 and 1981	
Figure 5.4b Distribution of Educational Attainment for People without Disabilities Age 25-64, Born Between 1905 and 1981.....	p. 95
Figure 5.5a Simulated Employment Probabilities over Birth Cohort for White Men by Disability Status and Education.....	p. 102
Figure 5.5b Simulated Employment Probabilities over Birth Cohort for White Women by Disability Status and Education.....	p. 102
Figure 5.5c Simulated Employment Probabilities over Birth Cohort for Black Men by Disability Status and Education.....	p. 103
Figure 5.5d Simulated Employment Probabilities over Birth Cohort for Black Women by Disability Status and Education.....	p. 104

CHAPTER 1: INTRODUCTION

Over the past 40 years, people with disabilities living in the U.S. have experienced dramatic social change. Beginning in the late 1960s and continuing through the 1980s, many state institutions for people with disabilities were dismantled and residents transitioned into community living arrangements. In the wake of deinstitutionalization, a “new asylum” for people with disabilities living in the community was cobbled together by the creation and expansion of disability welfare state provision (Erkulwater 2006). In conjunction with welfare state expansions for people with disabilities, civil rights legislation prescribing the inclusion of people with disabilities in schools and workplaces was signed into law. During the 1970s, two of the three most important pieces of such legislation were passed: the 1973 Vocational Rehabilitation Act and the 1975 Education of All Handicapped Children Act (later renamed the Individuals with Disabilities Education Act or IDEA). In 1990, the third important piece of civil rights legislation passed into law: the Americans with Disabilities Act (ADA), which solidified and expanded 20 years of gains in the civil rights arena for people with disabilities. After the passage of the ADA in particular, the hope was that employment rates for people with disabilities would mirror gains made among African Americans after the passage of similar civil rights legislation (DeLeire 2001).

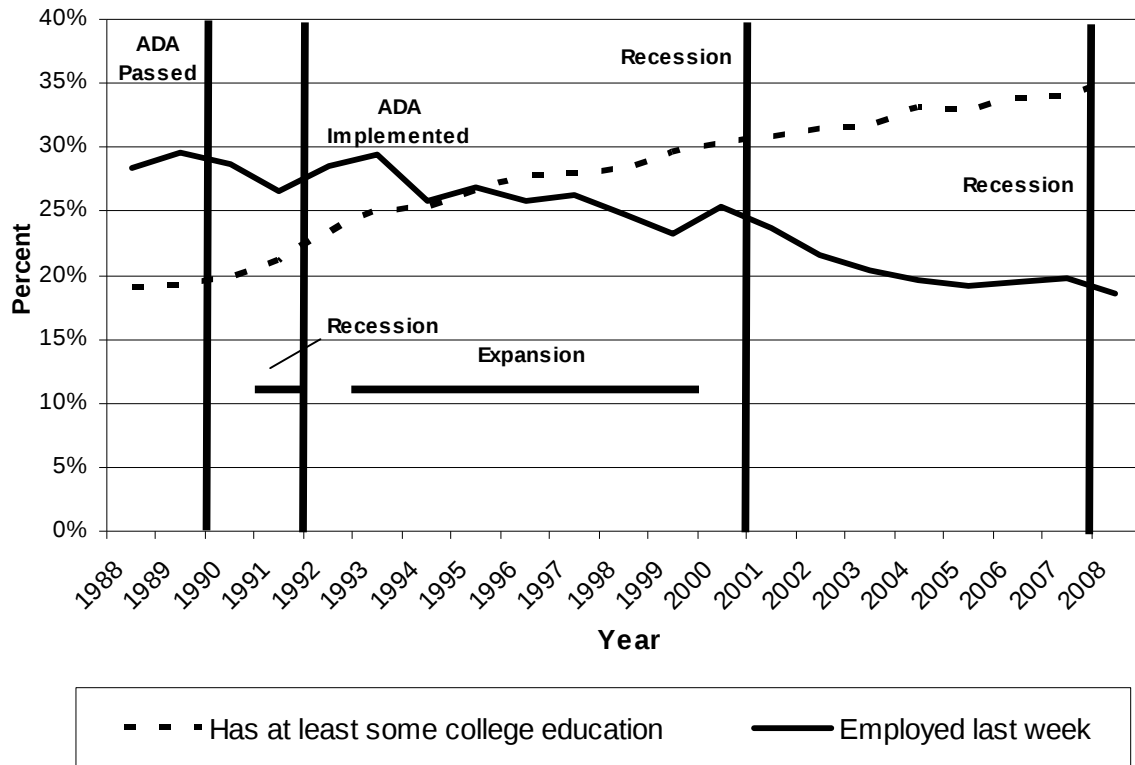
People with disabilities and their families now expect and demand more from schools, lawmakers, and society than they did in the past (Linton 1998; Engel and Munger 2003). As one of the informants from my fieldwork told me, “It’s no longer enough for people with disabilities to just live in the community; they have to be included.” Thus, more recent cohorts of people with disabilities coming of age under changed social and political regimes expect more for themselves than preceding cohorts who were institutionalized for part or all of their lives. Accordingly, more people with disabilities live in the community than ever before, and certain indicators of their social well-being show promising growth. In particular, the share of people with disabilities who attained any college education doubled between 1980 and 2000. According to estimates using the National Health Interview Survey, the share with at least some college education increased from 18% in 1980 to 36% in 2000 (Houtenville and Daly 2003).

Despite these gains in education, a disquieting trend has surfaced. People with disabilities were more likely to be employed 20 years ago than they were 10 years ago, and they are even less likely to be employed today (Bjelland, Erickson and Lee 2008). Figure 1.1 below juxtaposes the employment and education trends for people with disabilities over the past 20 years with the key policy and economic events. Although macro-level forces like the 2008-09 recession are surely implicated, even times of widespread economic prosperity - like the mid- to late-1990s – saw sharply declining employment among people with disabilities.

Although the decline is troubling in its own right, it also leads to two important observations that motivate the current investigation. First, the factors keeping people with disabilities out of paid employment are resistant to or perhaps even exacerbated by the social changes that have occurred. Second, it is unlikely that the type or the severity of disabling

conditions have changed in a way that could so dramatically depress employment rates over a relatively short period of time. Therefore, it is doubtful that widespread joblessness among people with disabilities is solely due to the physiological inability to work.

Figure 1.1 Employment and At Least Some College Education for People with Disabilities Aged 18-50, 1988-2008



Source: Author's calculations using 1988-2008 Current Population Surveys; National Bureau of Economic Research

It is likely that an important role is played by other features of disability in America, features inherent in the everyday environment of people with disabilities. Current studies of disability and employment focus largely on evaluating the effects of specific policy changes (the passage of the ADA and on Social Security Disability benefit expansions in particular) on the employment of adults with disabilities. A few studies examine how individuals with disabilities are affected by employer discrimination or the practices of disability non-profits.

This dissertation takes a different approach. Using a flexible, multi-methods research design, this study attempts to understand the experiences of people with disabilities within the context of the structural features of their everyday lives. Specifically, I identify the major actors and mechanisms that shape the educational and labor market expectations and experiences of people with disabilities, and that contribute to the persistent labor market inequality people with disabilities face. I also present a more comprehensive portrait than is currently available of how well people with disabilities are achieving economic survival in a climate of widespread joblessness.

DISABILITY, LABOR MARKET INEQUALITY, AND WIDESPREAD JOBLESSNESS

The view of disability adopted in this dissertation is heavily influenced by the social model of disability from disability studies. Since its inception in the mid-1970s, the social model has undergone multiple iterations. In general, proponents of the revised social model of disability acknowledge that, while the experience of disablement certainly has tangible and diverse physiological underpinnings, the social and political circumstances faced by most people with disabilities cements their shared status as a marginalized group (Linton 1998). Moreover, the social model of disability emphasizes the responsibility that prevailing social practices and attitudes bear in creating and perpetuating the social, political, and economic exclusion of people with disabilities.

The dominant perspective on disability in sociology is rooted in Goffman's (1963) work on stigma and the presentation of self and is represented in a voluminous literature, largely located in the social psychology literature (Link and Phelan 2001). In this vein,

disability is a discrediting or discreditable identity that individuals with disabilities must work to manage and/or conceal in the context of interpersonal interactions. Whereas stigma surely has bearing on the employment outcomes of individuals with disabilities, it fails to explain *eroding* employment for people with disabilities. Indeed, changes in the U.S. social, cultural and political context over the past forty years should have decreased the stigma of disability due to factors like increased exposure of the average American to people with disabilities after deinstitutionalization, changing cultural representations of people with disabilities in the media, and increased formalization of the civil rights of people with disabilities on national and international scales. Understandings of disability that rely on the stigma perspective have also come under fire from disability studies scholars. These observers criticize stigma theory's exclusive focus on the micro-level, the way in which stigma researchers implicitly or explicitly make stigma out to be a characteristic of individuals rather than of social relationships, and the way in which stigma theory privileges the perspective of non-disabled people and largely fails to incorporate the voices of people with disabilities (Barnes 1998; Oliver 1990; Fine and Asch 1988).

Because of the rapid political, social, and cultural change surrounding disability, understandings of disability that place emphasis on the institutional environments in which people with disabilities are nested are better positioned to explain labor market inequality and joblessness. Most of these theories make arguments about how institutions serving people with disabilities construct disability in ways that support organizational aims but which also have far-reaching consequences for the individual. For example, Goffman's (1961) classic work, *Asylums*, explains how mental institutions, as a type of total institution, establish a number of rituals and practices to process and control inmates, serving to remake individuals

into “mental patients.” With the demise of large state institutions warehousing individuals with disabilities, the mental institution described in *Asylums* no longer represents the Weberian ideal type of the “disabled institution.” However, this does not mean that institutions no longer play a vital role in the social construction of disabled identity. What this does suggest, though, is that we must consider the complex interplay between various types of institutions that each considers people with disabilities to form part or all of their client population. Additionally, we must also consider how employers, as organizations, are able to systematically exclude or steer job applicants with disabilities and why they may do so.

Political scientists emphasize how policies governing eligibility for welfare state benefits reflect historical rather than contemporary views of disability. These views revolve around the central assumption that people with disabilities are unable to work and must prove their inability to do so in order to obtain benefits and services provided through the welfare state. Furthermore, policies frequently represent political compromises between support for a visibly disadvantaged group and fears that the disability opt-out of paid work will be abused by those who do not truly have disabilities. Deborah Stone (1984) argues that, in the modern capitalist welfare state, there exists a moral economy that dictates society provide material support for certain categories of citizens who regularly lose out in the capitalist economy and legitimates their nonparticipation in paid work. These categories include children, the elderly, and people with disabilities. Children and the elderly are easily identified by the welfare state bureaucracy by imposing age cutoffs for eligibility; however, determining eligibility for disability is far more complicated.

In the U.S., political concerns with real or perceived abuses of the disability exemption from paid work have led to ever increasing demands and surveillance of applicants for public disability benefits. Public disability benefit recipients are routinely required to submit significant documentation of their inability to work in order to receive and keep benefits. Erkulwater (2006) argues that, beginning in the 1970s, disability advocates pushed for the replacement of former state institutions with “a ‘new asylum’ [in the community] of income support, health care, and social services,” managing to dramatically expand disability program growth but failing to establish a comprehensive social safety net (p. 4). Participation in the new asylum poses an intractable paradox for many participants who rely on its supports to live independently in the community but must observe entrenched eligibility rules requiring minimal or no work effort. Despite the history of welfare state provision to people with disabilities on the basis that they cannot work, political rhetoric around disability benefits has been subject to the same shift from welfare to workfare as other social welfare programs (Block, Coward, Ehrenreich, and Piven 1987); indeed, some authors argue that the primary reason the 1990 Americans with Disabilities Act was passed under a Republican administration was because it was sold as a way to encourage more people with disabilities to work off of the disability benefit rolls (Burke 2002, Krieger 2003, Mezey 2003).

In the wake of deinstitutionalization, an industry of private non-profit disability service providers rose up to provide services such as physical rehabilitation, personal attendant care, education, behavioral training, counseling, and vocational training. Some of these organizations were started by parent advocates of children with disabilities and some others were started by adherents of the independent living movement. Robert Scott (1969) and Gary

Albrecht (1990) note that, while disability non-profits are guided by humanistic missions and staffed by personnel from largely humanistic professions, political economic pressures often compel these organizations to adopt a business logic that prioritizes the survival of the organization over consumer autonomy.

Both authors address how these organizations unintentionally foster dependence on welfare state benefits and undermine participation in paid employment. Albrecht (1992) argues that, although such organizations are largely driven by humanitarian values, rehabilitation agencies are nevertheless businesses with products for sale. For rehabilitation agencies, the products they have for sale are services delivered to people with disabilities and, because services are most often paid for by state and federal government monies, people with disabilities are not the buyers but rather the raw materials used to produce the goods for sale. Therefore, according to Albrecht, agencies have strong incentives to hold onto clients in order to remain solvent.

Scott (1969) echoes these concerns and links this humanistic-business paradox to poor employment outcomes for people with disabilities. Like Albrecht, he argues that non-profits serving people with disabilities must ensure their long-term organizational survival. He further argues that, in order to maintain their survival, organizations develop relationships with their disabled consumers that undercut consumers' participation in competitive work: the pool of potential clients (people with disabilities) is finite – if organizations experience too much success in moving clients into work, they exhaust their client population and contribute to the very conditions under which their organizations will fail. Many organizations, Scott observes, hire their own clients at subminimum wages as a form of vocational training rather than placing them in competitive jobs in the community, and they

do so in order to maintain long-term relationships with consumers. Furthermore, consumers of these services face limited choices in how they can procure vocational and rehabilitative services, so they are frequently powerless to demand better options.

Others – who are largely observers with disabilities - emphasize the role of professionals, including those employed by disability nonprofits, in fostering and maintaining the dependency of people with disabilities. Michael Oliver (1990) describes how the omnipresence of professionals in the lives of people with disabilities is mandated and enforced by directives from political economic, legal, and professional sources:

Economic structures determine the roles of professionals as gatekeepers of scarce resources, legal structures determine their controlling functions as administrators of services, career structures determine their decisions about whose side they are actually on and cognitive structures determine their practice with individual disabled people who need help – otherwise, why would they be employed to help them? (91)

Vic Finkelstein (1998), a disability studies scholar and prominent figure in the British disability rights movement, has described the genesis of the disability non-profit industry as a process of professionals following people with disabilities from residential institutions into communities to maintain control and professional authority over the provision of care. He questions the involvement of professionals in aspects of service delivery where lay knowledge would suffice – why, he asks, do we need a professional to sell us a wheelchair, when we don't need one to sell us a bicycle? (p. 34). These ever-present professionals have a vested self-interest in maintaining their professional authority over people with disabilities because, as Tom Shakespeare (2006) points out, they are dependent upon their clients with disabilities for their professional identities and livelihoods. Furthermore, the relationships between people with disabilities and disability service professionals are, by definition,

unequal. Professionals are institutionally endowed with the final say over decisions and the allocation of resources. They also frequently adopt a paternalistic orientation towards their clients with disabilities, one in which their charges must be protected and taught to live in the outside world (Zola 1982: 69). Despite resistance by disability activists and the independent living movement, paternalism and professional control remain hallmarks of the relationship between disability service providers and consumers with disabilities.

Schooling for people with disabilities has not been explicitly addressed in social science theories on disability. However, in the process of collecting qualitative data, I found that schools are important to understanding labor market inequality and joblessness for people with disabilities. Legislation intended to foster social inclusion has experienced relative success in the arena of schools, partly through a mandatory document called the Individual Education Plan, or IEP, that outlines how resources will be invested in students with disabilities in order to include them in mainstream education to the maximum extent possible. Informants with disabilities told me about their successes in making claims for services and inclusion in mainstream educational activities because it was in the IEP, but then contrasted that success with their failures in breaking through employment barriers. Multiple informants described the process of moving from school to work as hitting a brick wall and concluded that the messages they heard in school that they could do anything they set their mind to and that success in school translates into success in work were patently false. Several respondents told me that if they had known that employment would be so hard to obtain, they would never have worked so hard to go to college.

Employer discrimination against people with disabilities is pervasive, despite civil rights protections prohibiting employers from doing so. Taking economic discrimination

against people with disabilities as a given, several studies in economics have attempted to estimate the extent to which the ADA has affected discrimination against people with disabilities. Several prominent economists argue that the ADA, contrary to its intention, has actually exacerbated employer discrimination against people with disabilities (DeLeire 2000; Acemoglu and Angrist 2001; Bound and Waidmann 2002). According to these arguments, employers have always been concerned about the perceived lower productivity of workers with disabilities. By mandating that employers provide potentially costly accommodations and allowing workers to sue employers for disability discrimination, the net effect of the ADA has been to inflate the perceived or actual costs to employers of hiring and retaining workers with disabilities. Thus, the ADA has increased the incentives for employers to discriminate against workers with disabilities.

Rather than focusing on cost incentives, sociological accounts of discrimination against workers with disabilities center on how discriminatory behavior can be explained by the desire of employers to maintain control over the organization, content, and pace of work. Central to the employment provisions of the ADA is the concept of *reasonable accommodation*, referring to changes employers can make in the work environment or adaptive equipment that enable otherwise qualified individuals with disabilities to perform job tasks. The issue of reasonableness is usually discussed in cost terms. An oft-cited statistic estimates that the cost of most accommodations falls under \$500 and many are, in fact, free. Despite the legal stipulation that accommodations are reasonable and the relatively low cost of most accommodations, Harlan and Robert (1998) found that employers strongly resist making many accommodations. They argue that employers are not concerned with the monetary cost of making accommodations per se, but rather with the perceived threat that the

principle of reasonable accommodation poses to their authority to determine how work gets done. Furthermore, employers see the true cost of an accommodation in its ability to spread to other workers, especially those without disabilities. For example, they may worry that if it is demonstrated that work schedules can be flexible for one worker, other workers may demand that schedules become flexible for all workers.

The current dissertation makes a contribution by incorporating insights from previous literature into a framework highlighting the importance of overlapping influences these four institutional actors – schools, non-profits, employers, and the welfare state – have on the opportunities and constraints faced by individuals with disabilities.

RESEARCH QUESTIONS

This dissertation will contribute to the sociological literature through an exploratory investigation of labor market inequality and joblessness among people with disabilities.

Though an estimated 20% of U.S. adults aged 18-64 have disabilities¹ (Altman and Bernstein 2008), prior sociological work has almost completely neglected the problem of widespread joblessness and labor market inequality among working-age people with disabilities. Based on the existing literature, I pose the following research questions to guide this dissertation:

- What are the forms of labor market inequality experienced by people with disabilities and what are the mechanisms that bring it about?
 - What characteristics predict employment for people with disabilities and are they the same as the characteristics that predict employment for people without disabilities?

¹ An estimated 19.8% of Americans aged 18-64 have a disability defined as any basic activity limitation (Altman and Bernstein 2008). Figure one was created using disability defined as a work limitation resulting from a health condition (the only measure of disability consistently available on the Current Population Surveys). Altman and Bernstein (2008) estimate that approximately 12% of Americans 18 and older have a work limitation.

- How does employer discrimination against people with disabilities persist in the face of civil rights protections?
 - What are the mechanisms that sort people with disabilities into specific jobs?
 - How much of the observed difference in wages between workers with and without disabilities is due to occupational sorting?
- What is the net effect of rapid social change on employment for people with disabilities?
 - Do cohorts of people with disabilities born more recently – and who have more exposure to mainstream education and civil rights protections - have better luck in securing employment?
 - How do people with disabilities understand the seeming inability of a college degree to overcome other barriers to employment?
- How do jobless adults with disabilities achieve economic survival?
 - What are the sources and amounts of income for jobless adults with disabilities?
 - To what extent do they experience material hardship?
 - How do they compare to jobless adults without disabilities?
 - Are employed adults with disabilities better off?

To answer the central questions of this dissertation, I use multiple methodological strategies in a flexible research design. Specifically, I use a mixed methods research design, integrating in-depth interviews, participant observation conducted at workshops on work and disability job fairs, text and audiovisual materials disseminated by government and disability agencies about work, and several types of statistical analyses using the 1996, 2001, and 2004 Survey of Income and Program Participation panels and the 1969-2006 National Health Interview Surveys. By combining evidence from qualitative materials with statistical analyses of nationally representative survey data, I am able to document disability economic inequality, assess the effects of rapid social change on employment trends by disability status, and describe the shape, experience, and meaning of labor market inequality and joblessness for people with disabilities.

RESEARCH METHODOLOGY

This dissertation relies on a mixed methods data collection and analysis strategy.

Specifically, I employed a sequential mixed methods design (Creswell 2003) in which I alternated the analysis of quantitative data with the collection and analysis of qualitative data. The difficulty of studying multiple institutions at once prompted the selection of a research method that emphasizes the individual person with disabilities' perspective as they negotiate several institutions at once. As I analyzed the quantitative data and found puzzling relationships, I incorporated questions in my qualitative interviews to probe for possible explanations; congruently, as I conducted interviews and read through my notes, I revised my existing research questions, added new ones, and, in one case, considerably altered my statistical analyses. As a direct outcome of this mixed methods strategy, I added research questions around the impacts of social change on employment and used quantitative analyses to understand how people with disabilities attaining postsecondary education fared. As I conducted my interviews, I became more aware that many of the jobless people I was interviewing had graduated from respected colleges with high GPAs and still found themselves unable to procure a good job or, sometimes, any job at all, leading me to question my own assumptions about the relationship between a college degree and job prospects.

Using existing sources of nationally representative data forces my hand somewhat, in that I must separately examine how well people with disabilities are faring in the workplace and longitudinal trends in employment participation and employment inequality. Recent data sets that are cross-sectional or follow respondents for a short period of time like the Surveys of Income and Program Participation (SIPP) – which I employ here – offer relatively rich measures of both disability and labor market outcomes, making them an ideal data source to

assess the effects of more nuanced features of disability on a range of labor market outcomes. However, the SIPP data collection does not extend far back enough in time to cover some of the important social and political changes around disability.

To assess the impact of social change on employment, I use the cross-sectional National Health Interview Surveys (NHIS). The NHIS are considered to be the primary source of information on Americans with disabilities and have been conducted annually since 1957. Using these data, I compare the unique careers of birth cohorts born between 1905 and 1980. Cohort analysis provides an excellent strategy to study the effects of social change on individuals. In his classic essay on cohorts, Norman Ryder (1965) argues that, because each “new cohort makes fresh contact with the contemporary social heritage and carries the impress of this encounter throughout life” (844). I pool the annual 1969 through 2006 NHIS surveys to cover important episodes of social and political change – such as deinstitutionalization, school change, the disability rights movement, and the passage of disability civil rights legislation – in order to assess the effects of dramatic social change on the employment and educational outcomes of people with disabilities over time.

I combine the above statistical analyses with the collection and analysis of qualitative data. As I alluded to above, these qualitative data have allowed me to refine my initial research questions and hypotheses, explore relationships and possible mechanisms suggested by initial quantitative data analysis, and confirm interpretations of quantitative results. The interviews, observations, and textual materials I have collected also permit me to assess the role of factors such as vocational rehabilitation, employer discrimination, or workplace accommodations in the employment decisions made by people with disabilities, factors for which information is rarely collected by surveys. Speaking with people with disabilities,

disability service professionals, disability advocates, and policymakers allows them to reflect on the institutional arrangements that I cannot directly observe but which constrain or facilitate their participation in paid employment. Finally, as Palmore (1978) points out, to identify causes of cohort effects identified through statistical analyses, one must incorporate corroborating evidence from outside sources – in this case, from the life narratives of people with disabilities and others.

ORGANIZATION OF THE DISSERTATION

This dissertation is organized into eight chapters, including the introduction and conclusion. Chapter two provides historical background on social and political change for people with disabilities and reviews the existing literature on disability and employment. It then goes on to describe the research questions addressed in this dissertation in more detail and, where appropriate, outlines hypotheses tested in the subsequent analytic chapters. Chapter three describes the survey databases and qualitative data collection, key measures, and analysis strategies. Chapter four investigates how traditional predictors of employment may differ for people with disabilities and assesses the relative contributions of individual characteristics and between- and within-occupation differences on disability wage inequality for full-time workers. Chapter five assesses the impacts of social change on employment over the 1969-2006 time period by comparing the employment trajectories of five-year birth cohorts. Chapter six investigates how jobless people with disabilities achieve economic survival by describing the sources and amounts of income they receive, the overall economic health of their households, and whether they are able to secure basic necessities of living. It further investigates how well they compare on measures of income and material hardship to jobless

adults without disabilities and employed adults with disabilities. Chapter seven presents findings from in-depth interviews with key informants and working-age adults with disabilities that shed light on the mechanisms contributing to labor market inequality and the experiences of employment discrimination. Chapter eight presents a discussion of substantive findings and conclusions.

CHAPTER 2: HISTORICAL BACKGROUND, LITERATURE REVIEW AND HYPOTHESES

This chapter begins by providing historical background on social change for people with disabilities over the past forty years. I then review the interdisciplinary literature on disability and employment and the literature on labor market inequality, joblessness, and material hardship. Based on this literature, I present preliminary hypotheses that will be assessed in the empirical chapters to follow.

In the review below, I start by addressing the literature relevant to the first set of research questions about labor market inequality for people with disabilities. I first summarize the existing literature on standard predictors of employment and discuss how these predictors may differ for people with disabilities. Second, I provide an overview of general mechanisms that lead to occupational sorting based on ascriptive characteristics and how sorting may contribute to wage inequality for people with disabilities. Third, I discuss the existing research on employment discrimination against people with disabilities – the main mechanism hypothesized in the employment and disability literature to cause labor market inequality – focusing on the literature dealing with the experience and forms of disability discrimination.

Next, I review the literature on social change and the employment of people with disabilities. I outline the approaches to studying social change that have already been taken and what has been found. I then discuss cohort analysis as an alternative method to

assess the net effects of social change on employment for people with disabilities and pose two broad hypotheses about the net effects of social change on employment when viewed through the lens of cohort analysis. Because college-educated people with disabilities in particular are not doing as well in the labor market as might be expected, I also discuss literature relevant to understanding the disjuncture between aspirations and career attainment.

Last, I discuss the existing literature on economic survival among jobless people. I summarize some of the strategies to accomplish economic survival uncovered by previous research and existing findings on the sources and amounts of income received by jobless people with and without disabilities.

HISTORICAL BACKGROUND: DISABILITY AND SOCIAL CHANGE OVER THE PAST FORTY YEARS

Beginning in the 1960s, people with disabilities have been affected by a series of dramatic social, political, and economic shifts. Prior to the 1960s, people with disabilities – particularly those with mental illness or cognitive disabilities – often lived in state asylums, public hospitals, or private homes. They frequently did not attend school, did not work, did not vote, were barred from getting married and, in some cities, were subject to the so-called “ugly laws” prohibiting them from appearing in public (Schweik 2009; Scotch 2001). Around the turn of the 20th century, disability-specific movements initiated by disability advocates pushed for improved schooling of the deaf and blind and the dismantling of large residential institutions. But it was not until the 1960s that people with disabilities themselves, inspired by the African American civil rights and the antiwar

movements, joined the disability rights movement in their own stead. Unlike the disability advocates of the previous half-century, these disability activists rejected reform justified by a discourse of pity or charity, instead using a rights-based discourse to demand an end to educational and residential segregation, insist on political equality, and fight for the overarching goal of social inclusion (Erkulwater 2006; Scotch 2001). Although the disability rights movement, in truth, was an amalgamation of several different disability rights movements, these smaller movements joined at critical junctures to push for the passage of significant legislation.

Disability activists successfully pushed for the passage of several major pieces of disability civil rights legislation. After unsuccessfully trying to amend the 1964 Civil Rights Act to include antidiscrimination language for people with physical and mental disabilities, congressmen sympathetic to the disability rights movement borrowed language from Title VI of the Civil Rights Act to create Section 504 of the 1973 Vocational Rehabilitation Act, prohibiting discrimination on the basis of disability “under any program or activity receiving federal financial assistance” (Percy 1989: 54; Scotch 2001). Additionally, Section 501 of the Rehabilitation Act mandated that federal agencies engage in affirmative action employment of people with disabilities, and Section 503 stipulated that federal contractors receiving grants in excess of \$2,500 engage in affirmative action hiring and promotion of people with disabilities. Despite being vetoed by President Nixon twice for reasons unrelated to the rights language, the 1973 Vocational Rehabilitation Act survived with its civil rights language intact (Berkowitz 1987; Percy 1989). At the time of its passage, the civil rights language tucked into a bill to reauthorize the Vocational Rehabilitation Act was regarded as largely symbolic (Percy

1989), but turned out to become the most important piece of disability civil rights legislation until the passage of the Americans with Disabilities Act in 1990.

Around the same time that Congress was deliberating the Vocational Rehabilitation Act, parent advocates for children with disabilities were successful in securing gains in education for children with disabilities and expanding their access to mainstream education. After advocates won two highly visible court cases against states for “arbitrarily and capriciously [denying] retarded children the right to an education” (Burgdorf 1980, 75-92, quoted in Percy 1989), they gained enough momentum to win Congressional support for enacting the 1975 Education for All Handicapped Children Act, later renamed the Individuals with Disabilities Education Act (IDEA). IDEA guaranteed children with disabilities a free and appropriate education and protected their rights within the school setting and it did so in unusually explicit and detailed language, reacting to the reluctance of many schools to fully incorporate students with disabilities (Bowe 1978). IDEA mandated that schools complete an Individual Education Plan (IEP) outlining strategies and resources for providing students with disabilities an appropriate education according to their abilities, and tied receipt of federal funds for special education to school compliance with the IEP requirements (Percy 1989).

In July of 1990, President H.W. Bush signed the ADA into law, and it was implemented in 1992. The ADA was largely modeled after Titles I and VII of the 1964 Civil Rights Act (the titles addressing equal access to public programs and employer discrimination) and Section 504 of the 1973 Rehabilitation Act. The ADA is generally considered to be the most important piece of U.S. disability civil rights legislation. However, despite its broad-ranging scope, the ADA has not proven to be the panacea that

advocates and activists once hoped it would be. In particular, the employment provisions contained in Title I of the ADA have failed to withstand judicial scrutiny. In data compiled by Parry and Albright for the American Bar Association, the success rate for employment discrimination cases brought under the ADA between 1992 and 2002 never exceeded 8% in any given year (reported in Mezey 2005: 68, Table 3.3). The foremost reason for the high failure rate of claimants under the ADA was not that the court failed to find that discrimination occurred, but rather because the court refused to hear the suit at all. Many fledgling suits under the ADA were dismissed from the bench because the plaintiff was found not to have a disability, thereby disqualifying them from bringing suit under the ADA (Mezey 2003; Colker 2005). In response, Congress passed the ADA Amendments Act in December 2008, adding language that disability should be considered in the broadest sense possible. It remains to be seen if the amendments will result in an increased success rate for suits brought under the ADA.

Over the latter half of the 20th century, several welfare state expansions directly affected people with disabilities. To a large extent, these expansions occurred independently of the disability rights movement. Nonetheless, they facilitated the rapid progress of deinstitutionalization and eased the transition into community living for people with disabilities (Erkulwater 2006). By 2007, nearly 200 federal programs operated by 20 different federal agencies, wholly or in part, served people with disabilities (GAO 2007).

Although there has been overall growth in disability entitlements, the most controversial growth has occurred in the Social Security Disability Insurance (DI) and Supplemental Security Income (SSI) programs. DI was enacted in 1956 as an extension

of the 1935 Social Security Act (Berkowitz 1987). DI provides beneficiaries with a cash benefit and, two years after receipt of the first cash payment, also provides access to Medicare. SSI was passed in 1972 and implemented in 1974 as part of the war on poverty and recipients are eligible for Medicaid automatically. Although DI and SSI use common criteria to determine disability, they serve different populations and view disability in fundamentally different ways. DI views disability as a form of early aging, necessitating early entry into the retirement system for covered workers. In contrast, SSI serves indigent individuals with disabilities (adults and children) and the poor elderly who lack a sufficient work record to access DI. The number of working age DI beneficiaries has grown from 1.4 million in 1969 to 6.8 million in 2008. (SSA 2009a). The number of working-age SSI recipients has grown from 1.5 million in 1974 to 2.2 million in 2006, and the number of child SSI recipients grew from 71,000 to 1.1 million over the same time period (SSA 2009b).

The growth in DI and SSI enrollments is related to two political developments. First, in the early 1980s, responding to the Reagan administration-led purge of the Social Security Administration's (SSA) disability rolls, disability advocates successfully filed hundreds of class action lawsuits against SSA and rallied public opinion against SSA's policies of benefit retrenchment. This led to the passage of a 1984 law that not only repealed the policies instigating the purge, but also mandated that SSA incorporate functional, as well as medical, criteria into its evaluation for disability eligibility – easing the application process for applicants with mental illness, alcoholism, and musculoskeletal limitations who had previously been denied access to the SSI and DI programs (Berkowitz 1987; Erkulwater 2006). The second political development directly

affected the eligibility of children with disabilities for SSI benefits. In 1990 the U.S. Supreme Court heard *Sullivan v. Zebley*, a class action lawsuit representing over 300,000 children with disabilities. Although children have been eligible for SSI since its inception, they were subject to the “comparable severity” standard, which SSA put into practice by comparing child SSI applicants to medical listings of qualified medical conditions, a practice that advocates argued was too strict. In their 7-2 decision, the Supreme Court ruled that SSA must adopt an eligibility determination standard for children that considered personal and functional factors, leading to rapid growth in the number of children on the SSI rolls (Erkulwater 2006).

The changing U.S. social and political climate has indisputably had positive ramifications for people with disabilities. The enactment of several pieces of civil rights legislation is a particularly potent symbol of how far people with disabilities have come since the days of ugly laws and life-long institutionalization. However, progress for people with disabilities has been uneven. People with disabilities still experience substantial employer discrimination – more than 20,000 claims alleging disability discrimination were filed with the Equal Employment Opportunity Commission in fiscal year 2009 alone (EEOC 2010). Likewise, only 56% of students covered by IDEA graduate from high school with a diploma, although, of students graduating from high school, an identical percentage of students with disabilities and without disabilities enroll in college (NCES 2005, 2007).

Welfare state expansions are proving to be a mixed blessing for people with disabilities. On the one hand, public health insurance (and its relatively expansive coverage of prescription medications and assistive technologies like wheelchairs),

publicly funded personal attendant care, rent subsidies, and cash assistance have facilitated the transition of previously institutionalized individuals into community living arrangements and provide the wherewithal for many people with disabilities to live independently in the community today. The new asylum has succeeded in this regard. On the other hand, public benefits provided on the basis of disability frequently impose eligibility restrictions on recipients that force them to keep earnings low or nonexistent in order to retain benefits. Some of the services provided by public assistance – assistive technologies and personal attendant care in particular – are inadequately covered or unavailable through private health insurance and extremely expensive to purchase on the private market (Batavia 1996). Moreover, the services that people with disabilities access through public benefits are frequently necessary in order to work – for example, personal attendant care to assist them in getting dressed in the morning, motorized wheelchairs to negotiate the office. However, because of the requirements imposed by public assistance programs, working jeopardizes access to the very services individuals need to get and keep jobs.

LABOR MARKET INEQUALITY FOR PEOPLE WITH DISABILITIES

The first set of research questions raised in this dissertation ask what the forms of labor market inequality experienced by people with disabilities are and what mechanisms exist to bring observed inequalities about. One of the most prominent features of economic life for people with disabilities is the phenomenon of widespread joblessness. When so many people with disabilities are out of work, what characteristics seem to predict who is most likely to work? And are these characteristics the same ones that predict employment for

people without disabilities? Furthermore, the current body of work on disability labor market inequality indicates that, when people with disabilities do obtain work, they face disparities in pay when compared to their peers without disabilities. What does the existing literature have to say about the extent of the wage inequality experienced by people with disabilities and the mechanisms that contribute to observed wage gaps?

Who is most likely to work?

Previous research provides us with some clues about which people with disabilities work, but the portrayal is far from complete. Analysts of disability employment inequality have generally estimated additive models incorporating a well-established set of predictors also used in investigations of gender and racial employment inequality: measures of human capital (most commonly, education), demographic characteristics (age, race/ethnicity, sex) and, particularly in the case of gender differences, a set of household characteristics such as marital status and the presence of dependent children. Analysts of disability employment inequality may also include measures of disability or other disability-related characteristics (e.g., severity, disability type, and timing of disability onset). However, they have not scrutinized how well-established predictors of employment may differ for people with disabilities.

There are some exceptions. In their report of findings from the 1998 California Work and Health Survey, Yelin and Trupin (2003) report that, after controlling for demographic and health-related characteristics, college-educated working-age people with disabilities experience a large advantage in employment rates over people with disabilities at lower levels of educational attainment. Furthermore, they find that the comparative advantage in employment rates realized by college-educated people with

disabilities is much larger than the comparative advantage realized by college-educated people without disabilities over people without disabilities at lower levels of education. With the nationally representative 2000 Current Population Survey, they report a similar finding after controlling for differences in demographic characteristics (Yelin and Trupin 2002). In both instances, however, they find the comparative advantage experienced by college graduates with disabilities translates into an employment rate less than or equivalent to the employment rate of high school graduates without disabilities.

Although they do not discuss them, Yelin and Trupin (2003) also find in their study of California data that employment differences by race, marital status, gender, age, and urban residence vary by disability status (p. 25, Table 2). For example, they report a much wider black-white gap in employment rates among working-age persons with disabilities than among persons without disabilities (11 vs. 4 percentage points) and a large gap in Asian-white employment rates among persons with disabilities (12 percentage points) where none exists among persons without disabilities. However, observed differences by disability status do not suggest a uniform picture of larger disadvantage among those with disabilities experienced by groups who are already disadvantaged. Women with disabilities, in particular, experience a smaller gap in employment rates relative to men with disabilities than women without disabilities do compared to men without disabilities (2.5 vs. 16 percentage points).

There are no examinations of whether Yelin and Trupin's (2003) findings hold in a national sample, nor are there any examinations that also consider whether household characteristics typically considered in analyses of gender and employment (such as the presence of dependent children) differ by disability status. To redress this shortcoming, I

test the following hypotheses with multivariate statistical analyses of nationally representative data:

Hypothesis 1.1: College-educated people with disabilities experience a greater comparative advantage over people with disabilities with less than a college education than college-educated people without disabilities enjoy over people without disabilities without a college education.

Hypothesis 1.2: Despite the larger comparative advantage enjoyed by college-educated people with disabilities, they still experience significant disadvantage in employment rates relative to college-educated people without disabilities.

Hypotheses 1.1 and 1.2 call for a replication of Yelin and Trupin's (2002, 2003) findings on the differential impact of education by disability status with more contemporary data.

I also test, with more recent and nationally-representative data, Yelin and Trupin's (2003) findings from their study of California residents in hypotheses 1.3 and 1.4.

Hypothesis 1.3: Women with disabilities experience a smaller disadvantage in the likelihood of being employed compared to men with disabilities than do women without disabilities compared to men without disabilities.

Hypothesis 1.4: Net of other factors, nonwhites with disabilities experience a larger disadvantage in the likelihood of being employed relative to whites with disabilities than do their counterparts without disabilities relative to whites without disabilities.

I do not pose any a priori hypotheses about the relationship between household characteristics and employment because it is unclear whether and how the effects on the

likelihood of employment of marital status, presence of dependent children, living arrangements, and the earnings of other household members will differ by disability status. This set of predictors, common in the gender and employment literature, is generally associated with women's withdrawal from the labor force (see Padavic and Reskin 2002 for an overview). Because of traditional gender norms, the weight of family caregiving obligations falls disproportionately on women and, consequently, dampens their labor force participation. For example, women with dependent children – especially young children – tend to work at significantly lower rates than women without dependent children. The earnings of other household members, particularly those of husbands for married women, have also traditionally held a negative relationship with female employment. The explanation of this relationship has been that women living in households that see a comfortable income without their earnings will be less likely to work.

On the one hand, it is plausible that the relationship of household characteristics to employment for people with disabilities would hold a negative relationship with employment, similar to the case for women. When they reside in households where other earners make enough to support the household, people with disabilities may be more likely to withdraw from the labor force. Because of the high rate of SSI and SSDI benefit reciprocity, people with disabilities may also act as convenient (paid) caregivers for young children, leading to a negative relationship between the presence of children and employment for people with disabilities. On the other hand, co-residence with a spouse or other relatives may indicate that more informal supports are available for individuals to seek and maintain employment, and thus would be positively related to employment.

Moreover, in light of the significantly lower average family incomes of people with disabilities (Loprest and Maag 2007), the presence of children may indicate a pressing need for people with disabilities to work and would therefore demonstrate a positive relationship with employment.

Disability Wage Inequality

Current research indicates that there are significant gaps in pay between workers with and without disabilities. In general, observed pay gaps persist after controlling for various individual-level characteristics. Studies of disability wage inequality often begin the same way as studies of wage inequality for other groups, where analysts typically start by estimating an unadjusted wage gap by race or gender, then proceed to add explanatory variables related to differences in productivity (e.g., education, work experience) and other factors thought to contribute to differences in labor force outcomes (such as marital status and number of children in the case of gender gaps, or neighborhood characteristics in the case of racial gaps). After controlling for these factors, the remaining gap is usually attributed to discrimination (Leicht 2008).

Studies of disability earnings inequality generally go a step further than do studies of wage inequality in other groups. Scholars of disability earnings inequality parse the effects of disability into two parts: 1) the effects of disability on labor market outcomes due to lower productivity, and 2) the effects of disability on labor market outcomes attributable to economic discrimination. To these analysts, disability signals – at least, in part – diminished productivity in an individual, whether because s/he is less capable than others without disabilities, s/he tires more easily, it takes him or her more time to accomplish the same work tasks relative to others, or s/he must invest more time in

attending health care appointments and the like and are thus less able to participate in paid employment, especially full-time paid employment (Oi 1996). Even after controlling for aspects of disability that proxy for diminished productivity, most analysts find a statistically significant and negative relationship between disability and labor market outcomes remains. This remainder is attributed to economic discrimination on the basis of disability.

Estimates of wage inequality suggest that workers with disabilities fared worse in the 1990s than they did in the 1980s. Baldwin (1999) found that, after controlling for productivity differentials, the earnings of men with disabilities matched those of men without disabilities in 1984. By 1990, however, discrimination was responsible for reducing the wages of men with disabilities by up to \$2.15 per hour (or up to \$4,300 per year). Similarly, DeLeire (2000, 2001) found that the disability wage gap for men narrowed in the years leading up to 1990 and then sharply increased in 1990. He also found that, although the wage gap narrowed again in the years after 1990, the disability wage gap was still larger in 1995 than it was in 1989. Women, by contrast, experienced discrimination in wages that reduced their hourly wages by up to \$1.66 per hour (\$3,320 per year) in 1984, but in 1990, earned comparable wages to women without disabilities after controlling for productivity differentials (Baldwin 1999).

Occupational Sorting and Disability Wage Inequality

Previous analyses of disability wage inequality have not considered how attributes of the labor market may impact gaps in earnings between persons with and without disabilities over and above individual-level characteristics. Insights from the sociological literature on wage inequality indicate that workers are systematically sorted into different

occupations based on ascriptive characteristics such as race or gender. This differential sorting contributes to observed inequalities in earnings that remain unaccounted for by individual characteristics alone. In this section, I begin with a brief review of the sociological literature on occupational sorting. In the course of reviewing this literature, I discuss mechanisms specific to people with disabilities that may lead to differential occupational sorting and sketch out several hypotheses about how occupational sorting may affect disability earnings inequality.

Workers come to be employed in certain occupations due to both supply- and demand-side factors (Weeden and Grusky 2005). Individuals self-select into occupations based on what they consider to be desirable working conditions and their beliefs and perceptions about how well particular occupations match their preexisting beliefs, attitudes, lifestyles, and other personal characteristics. According to this logic, people with disabilities may sort into particular occupations because they believe some occupations will be better at providing accommodations like flexible work schedules, or they may believe that certain occupations will provide better health care coverage than others.

In addition to the self-selection that occurs, employers and other gatekeepers can systematically select certain types of people into specific occupations through training and licensing requirements, wording of job requirements, recruitment strategies, and differential hiring practices. It is plausible that one of the characteristics employers may sort on is disability. For example, searching for ways to cut health care benefit costs, Wal-Mart circulated an internal memo to their board members in 2005 suggesting that they revise job advertisements company-wide “so that all jobs include some physical

activity (e.g., all cashiers do some cart-gathering)”in order to screen out “unhealthy” applicants that might drive up employee benefit costs (Greenhouse and Barbaro 2005).

Research on gender and racial earnings inequality has demonstrated that earnings inequality varies by occupation in three general ways. First, because individuals are sorted into occupations – at least in part – on the basis of sociological characteristics, members of certain groups are systematically allocated to higher or lower-paying occupations. For example, women tend to work in lower-paying occupations relative to men – for a variety of reasons – so that after controlling for other individual-level characteristics related to earnings, women still earn significantly less than men (Padavic and Reskin 2002). However, earnings inequality can also exist within occupations. In fact, within-occupation wage inequality is substantial and has actually been on the rise in recent years (Kim and Sakamoto 2008). Consequently, even within the same occupation, earnings may vary systematically by social and/or demographic characteristics. Last, the extent to which wage inequality exists within a particular occupation may depend on whether that occupation is at the low or high end of the occupational distribution.

For example, Kaufman (1983) found that the within-occupation black-white wage gap widens in higher-paying occupations, but that, in some lower-paid occupations, the earnings of African American workers actually outstrip those of their white co-workers. After confirming that the relationship between intra-occupational earnings inequality and position in the overall occupational distribution persists in more recent data, Grodsky and Pager (2001) went one step further and investigated which occupations had the most and least racial earnings inequality. Blacks working as physicians, lawyers, insurance salespersons, and in other professional client-based services experienced the largest

earnings disadvantage relative to whites. In contrast, earnings inequality was smallest among blacks working in occupations that did not depend on building up a client base, such as bus driver, hotel clerk, and woodworking machine operator. Thus, those at the top of the earnings distribution experienced more wage inequality than those located near the middle or bottom of the earnings distribution.

It is plausible that different mechanisms operate to select workers with disabilities into certain occupations over others and that this differential allocation, in turn, results in significant differences in the observed mean wages of workers with and without disabilities. For example, on the supply side, workers with physical disabilities may disproportionately select into occupations with few or no manual requirements and workers with sensory limitations may select into occupations they believe to have reduced requirements for verbal communication and/or reading. It is difficult to say whether these types of task-related selection would have any impact on wage inequality and, if so, in what direction. All workers with disabilities may also be more likely to select into occupations they believe will offer more accommodating work schedules and better employer-provided health care benefits. Choosing work on the basis of accommodations and health care benefits may involve trade-offs between desired benefits or accommodations and lower pay. Indeed, Kalleberg, Reskin, and Hudson (2002) find that choosing nonstandard employment, such as independent contracting or part-time work, increases the chances that workers will be paid less and face reduced access to health care benefits and pension plans. Different allocation mechanisms may operate on the demand side as well, although it is unclear, a priori, what those mechanisms might look like for workers with disabilities.

The above review and discussion of the literature on occupations and earnings inequality suggests that the primary way occupations contribute to disability earnings inequality is through selection into certain occupations and out of others. Moreover, previous literature on employment of people with disabilities implies that this selection is most likely to occur through either self-selection by people with disabilities themselves or discriminatory behavior by employers. On this basis, I posit the following hypothesis:

Hypothesis 1.5: Occupations contribute to disability earnings inequality chiefly through *between-occupation* differences, wherein workers with disabilities tend to be selected into lower-paying occupations and out of higher-paid ones.

I do not have hypotheses about the magnitude or direction of within-occupation disability wage inequality, or what the effects of overall occupational position might be on the disability wage gap.

The persistence of employment discrimination

One of the major themes of the extant literature on disability labor market inequality is that employment discrimination against people with disabilities persists (or has even worsened) in the face of civil rights protections. The bulk of existing research on employer discrimination against people with disabilities is made up of studies that attempt to estimate the magnitude of unemployment due to economic discrimination. Few studies examine the experience of discrimination or the strategies used by employers to discriminate against people with disabilities, and none of the studies I could locate discussed discrimination against people with disabilities in the hiring process.

The available evidence on discrimination against workers with disabilities indicates that, although discrimination is carried out at the interpersonal level, it is

organizational factors which allow interpersonal forms of discrimination against workers with disabilities to become and remain permanent features of daily work life. One organizational-level mechanism entails making negative stereotypes permanent characterizations of individual employees through substandard performance evaluations, which are then used as justification for continued differential treatment of workers with disabilities (Robert and Harlan 2006). Through negative performance reviews, employees with disabilities are socially constructed as “liability workers” who are a drain on company resources. Thus, the failure to promote employees with disabilities at the same rate as their peers without disabilities can be rationalized by their relatively lower documented performance. Furthermore, because workers with disabilities are perceived as liabilities to the company rather than assets, poor performance evaluations are also used to justify the denial of reasonable accommodations when they are requested by employees with disabilities. After having been construed as lower-performing workers, accommodations to employees with disabilities may be deemed undeserved or non-cost-effective.

A second organizational-level mechanism which enables discrimination to persist against workers with disabilities is related to the prevailing political and economic climate. As employers restructure to create more efficient work organizations, they demand that workers do more work with fewer resources (what Robert and Harlan (2006) call the “ideology of scarcity”). This attitude is compounded for public sector employers who also face political demands to eliminate perceived wastes of tax-payer money. In a climate where all workers are required to do more with less, the ideology of scarcity can exacerbate workplace tensions among remaining workers, leading to the targeting of

marginalized workers – including minority workers and workers with disabilities – as convenient scapegoats, subjecting these workers to insensitivity and hostility on the job. Targeting of workers with disabilities may be especially prevalent because they may be perceived as less capable or productive workers, and reasonable accommodations may be seen as particularly unfair in a time of scarce resources.

The current evidence on discrimination against currently employed people with disabilities and the literature on discrimination against other groups suggests that *statistical discrimination* – that is, instances where employers use “rules of thumb” or observations about a group of people as a whole to make judgments about an individual applicant’s suitability – is increasingly the predominant form of discrimination against job applicants from marginalized groups (Baumle and Fossett 2005). For example, in his study of employment declines among inner-city black men, Wilson (1997) notes the rise of statistical, rather than prejudice-based, discrimination against black inner-city job applicants. Wilson found that employers are less likely to turn away these applicants because they seek to exclude blacks, and more likely to turn away individual job applicants from the inner-city because of general observations about the skill level, professionalism, and work ethic of inner-city residents as a whole. It may be that, in a climate of corporate downsizing and demands for increased efficiency, job applicants with disabilities are screened out by interviewers who believe that people with disabilities may work more slowly, take more sick time, leave the company sooner, and/or incur more health care costs relative to job applicants without disabilities, regardless of whether or not these concerns are actually true or apply to the job candidate under consideration. Based on this literature, I hypothesize that,

Hypothesis 1.6: Discrimination against people with disabilities during the hiring process will take the form of statistical, rather than prejudice-based, discrimination.

In summary, the existing literature on employment and disability suggests that conventional predictors of labor market participation may hold a different relationship with the likelihood of employment for people with disabilities than they do for people without disabilities. However, in most cases, the current literature is silent about the direction or magnitude of these differences. When people with disabilities do become employed, they are paid less, on average, than their counterparts without disabilities, even after controlling for individual-level characteristics. Although previous research has focused on individual-level determinants of the disability wage gap, the sociological literature on wage inequality suggests that occupational sorting may act as a powerful mechanism to produce observed disparities in pay, regardless of individual characteristics. Furthermore, there is little evidence about the mechanisms that operate to sort people with disabilities into different occupations than their peers without disabilities. Last, one of the main mechanisms theorized to produce lower labor market success among people with disabilities is employer discrimination. However, there is little existing evidence on how employment discrimination persists in the face of civil rights protections and what forms it may take, particularly during the hiring process.

UNDERSTANDING THE EFFECTS OF SOCIAL CHANGE ON EMPLOYMENT

The second set of research questions addressed by this dissertation asks what the net effects of rapid social change have been on employment for people with disabilities.

While the last section focused on labor market inequality without reference to how it may have changed over time, the research questions addressed in this section grapple with how disability employment inequality in the U.S. may have changed over the 1969-2006 period. In the section that follows, I describe some of the most visible changes of the latter half of the twentieth century that, alongside the social and political changes I described in the introductory chapter, may also affect observed trends in the employment of people with disabilities. Taking these macro-level changes into account, I present several hypotheses about changes in employment for people with disabilities.

Contributions of social, political, and economic changes to disability employment trends

As discussed in the beginning of this chapter, a number of political and social changes took place over the latter half of the twentieth century that affect the role of people with disabilities in society in general and the workplace in particular. These changes include the enactment of civil rights legislation mandating their inclusion in the community and schools, and prohibiting employment discrimination on the basis of disability. They also include deinstitutionalization and the expansion of public benefits for people with disabilities. Over the same period of time, the U.S. also experienced significant changes in the economy, organization of work, and workforce composition that may also affect trends in employment for people with disabilities.

The past thirty years have been characterized by economic changes that contribute to the growth of economic inequality. These changes include economic restructuring that shifts jobs away from the traditionally higher-paid manufacturing sector to the lower-paid service sector; vanishing internal labor markets resulting in reduced on-the-job training, shorter or nonexistent career ladders, and decreased job security; and increases in

contingent, part-time, and other nonstandard work arrangements (Bernhardt et al. 2001; Kalleberg, Reskin, and Hudson 2000; Yelin and Trupin 2002). These changes have resulted, at least partially, in higher wage penalties associated with shorter job tenure; a decline in the share of workers with employer-subsidized health insurance; and increasing returns to skill in which wages at higher levels of education have increased faster than wages at lower levels of education (Bernhardt et al. 2001; Stapleton, Goodman, and Houtenville 2003; Yelin and Trupin 2002). At the same time, through the emerging field of “diversity management,” employers have increasingly adopted practices to comply (or appear to comply) with equal employment opportunity law (Edelman 1992). Although there is little evidence on the extent to which employers have applied pro-diversity policies to employees with disabilities, a recent study by Schur and colleagues (2009) found that company policies that favor fairness and responsiveness can mitigate observed disability differences in pay, benefits, and employee satisfaction.

In addition to changes in the economy and workplace, substantial changes in the demographic composition of the labor force have also occurred. Although the overall U.S. labor force participation rate increased by nearly 20% between 1960 and 1999, there have been vital differences by gender, race, age, and education (Yelin and Trupin 2002). Over the latter half of the twentieth century, labor force participation rates actually fell for working-age men by more than 7% and, among men age 55 to 64 this decline was more than 20%. In contrast, labor force participation rates increased for working-age women by 69% in general, and more than doubled for women between the ages of 25 and 34. Labor force participation rates grew faster among working-age whites than for working-age African Americans (15% vs. 10% over the 1960-1999 period). Labor force

participation rates decreased among persons age 55 to 64, while they increased for younger age groups. Finally, labor force participation rates grew for those with at least a high school education so that, by 1999, working age individuals with at least a college education participated in the labor force at a rate 40% higher than individuals with less than a high school education.

What might these changes mean for people with disabilities? In the conclusion to their chapter describing overall and disability-specific economic trends, Yelin and Trupin (2002) speculate that increases in nonstandard work arrangements may be to the benefit of working age people with disabilities, though they do not test this supposition. Similarly, Schur (2003) finds that, at the closing of the twentieth century, not only were workers with disabilities more likely than other workers to be employed in part-time and contingent work relationships, but that most did so voluntarily. Although she does not empirically test this, Schur suggests that growth in the availability of part-time and contingent work arrangements may enable work participation among individuals with disabilities who would not work otherwise.

Most investigations of employment trends focus narrowly on the causes underlying the observed 1990s disability employment decline described in the introduction. The majority of these studies focus on the effects of the 1990 Americans with Disabilities Act (ADA) and the expansion of disability cash transfer benefits. Several analysts argue that the net effect of the ADA was to *increase* discrimination by employers afraid of lawsuits and accommodation costs (DeLeire 2000; Acemoglu and Angrist 2001; Bound and Waidmann 2002). Others emphasize that the full employment impacts of public disability cash transfers expansions occurring in the early 1980s were

not fully realized until the 1992 recession displaced older men with limited education who, rather than embarking on a new, potentially unsuccessful job search, chose to retire early by applying for disability benefits – resulting in a large drop in the disability employment rate (Autor and Duggan 2003).

Still narrowly focused on explaining the 1990s employment decline, other analysts consider the effects of compositional changes in the population of people with disabilities, including changes in the type and severity of disability (Hill, Livermore, and Houtenville 2003; Houtenville and Daly 2003; Kaye 2003) and in the socioeconomic and demographic characteristics of people with disabilities (Houtenville and Daly 2003). While changes in demographic and socioeconomic characteristics changed in a way that should have *favorably* impacted employment rates (an increase in educational attainment in particular), analysts disagree as to whether changes in the type or severity of disabling conditions contribute to employment declines. On the one hand, Kaye (2003) finds that increases in chronic conditions and obesity almost entirely explain increases in the share of people with disabilities who indicate they are unable to work at all. Similarly, Hill, Livermore, and Houtenville (2003) find that more people reporting work limitations have high-cost chronic health conditions, suggesting that people with disabilities towards the end of the 20th century are more likely to have severe disabling conditions than they were at earlier points. On the other hand, Houtenville and Daly (2003) find that declines in employment were steepest among people with disabilities with better self-reported health.

Finally, some observers suggest that workers with disabilities may be particularly disadvantaged when it comes to managing particular aspects of the new economy. In his study of the effects of job displacement on workers with disabilities, Yelin (1992)

concludes that workers with disabilities are less able to cope with job instability and less able to secure new employment as the job search increasingly requires workers to retrain or move to different geographic locations. Stapleton, Goodman, and Houtenville (2003) find that, at least with respect to the 1990s employment decline, within-occupation changes in the nature of work appear to explain a larger share of declining employment rates than shifts in the overall occupational distribution. Specifically, Stapleton and colleagues find that workers with disabilities tend to be overrepresented in jobs that do not offer employer-subsidized health insurance and in jobs in large firms (those with 1,000 or more employees), and underrepresented in jobs that require higher levels of specific vocational preparation or language requirements (though there was no relationship between disability and the percentage of workers with at least a bachelor's degree). Stapleton and colleagues are reluctant to attribute any causal role to these factors and observed employment declines.

Using cohorts to understand social change

The existing research on disability and employment trends does not consider whether and how social, political, and economic changes occurring throughout the 20th century may have affected long-term trends in economic inequality for people with disabilities. Nor has it investigated whether and how coming of age under more inclusive social and political arrangements may lead to employment trends for people with disabilities born in the latter half of the 20th century that are distinct from the employment trends of people with disabilities born earlier in the 20th century.

One prominent approach employed to address the challenge of understanding how larger societal changes are experienced by individuals is that of cohort analysis (Ryder

1965). In the opening to his classic text *The Sociological Imagination*, C. Wright Mills (1959) characterizes one of the central tasks of sociology as the investigation of the intersection between “man and society, of biography and history, of self and world” (p. 4). Comparing the careers of two or more birth cohorts in particular allows us to take advantage of the fact that each birth cohort faces a distinctive set of experiences with social, political, and economic institutions, historical events such as war or economic crises, and its own unique set of characteristics (composition, size, etc.). Thus, comparing the careers of people with disabilities born at different points in the transition from institutional living arrangements to community living arrangements, the rise and formalization of disability civil rights, dramatic improvements in educational inclusion and attainment, and the multitude of other changes discussed here and in the introductory chapter allows us to investigate how these changes contribute to the changes we observe over time in the employment of people with disabilities.

Using a cohort framework and considering the previous literature on the effects of social change on employment for people with disabilities, I evaluate the following competing hypotheses below.

Hypothesis 2.1: Controlling for age, more recent birth cohorts of people with disabilities (specifically, those born in 1970 or afterwards) should have significantly higher employment rates than birth cohorts of people with disabilities born earlier in the 20th century.

In light of 1) the passage of the Individuals with Disabilities Education Act (IDEA) in 1975 that mandated the meaningful inclusion of children with disabilities in mainstream education, 2) the resulting growth in the share of people with disabilities graduating from

high school and going to college, and 3) the relatively higher returns to education for people with disabilities found in previous studies, I expect that successive cohorts of people with disabilities will experience higher employment rates than earlier cohorts did at the same ages. Specifically, these advantages should be strongest for people born in 1970 or later, because these are the individuals who first experienced the full force of the 1975 IDEA legislation on their schooling. Furthermore, overall shifts in the demographic composition of the labor force may also contribute to higher employment rates among cohorts of people with disabilities born later in the 20th century. I posit hypothesis 2.2 as a contrast to hypothesis 2.1:

Hypothesis 2.2: Relative to earlier cohorts of people with disabilities, middle-term and later birth cohorts of people with disabilities experience lower employment rates at the same ages.

There are several reasons to believe that employment rates among recent cohorts of people with disabilities may have fallen, rather than risen, relative to those of older cohorts. First, the acceleration of deinstitutionalization during the mid-twentieth century may contribute to lower employment rates among cohorts born later in the 20th century simply because prior to widespread deinstitutionalization, people with the most significant disabilities were likely to be excluded from employment statistics due to their institutional living arrangements. As an artifact of sampling frame, the share of people with disabilities with very severe disabilities for whom it is difficult or undesirable to work under any circumstances may have increased and contributed to a decline in employment rates.

Second, the increase in youth with disabilities enrolling in SSI and the expansion of participation in disability cash transfer benefit programs over all ages may also effectively depress employment rates among the most recent cohorts of people with disabilities (those born in 1975 or afterwards), net of age effects. Third, if analysts such as Acemoglu and Angrist (2001) are correct in concluding that the impact of employment antidiscrimination legislation was to effectively increase employer discrimination against people with disabilities, we should also see a decline in employment rates among cohorts of people with disabilities born after 1965 or so (those who would have just been entering the labor force around the time of the ADA's passage) relative to members of cohorts born earlier.

Joblessness among college-educated people with disabilities

As ethnographies by the likes of Katherine Newman (1999) and Michèle Lamont (2000) convincingly demonstrate, the world of work is incredibly important to adult identity for reasons that extend beyond earning a paycheck. What we do for a living colors our evaluations of the people around us, the general social order, and our place within it. As previous research and the statistical analyses presented in later chapters show, college-educated people with disabilities are hardly immune from the joblessness so prevalent among people with disabilities as a group. How do these people in particular experience and understand their joblessness?

As most studies of employment outcomes show, education is the key predictor of how well one does in the labor market. Indeed, young people are subjected to sometimes lengthy education and training programs to prepare them for their future occupations, although there are important variations in access to and success within the arena of

schooling. However, inequalities in schooling are conceptualized in terms of differential completion of a high school or college education, rather than differences in the ability to put a completed college degree to use in the labor market (e.g., Bowles and Gintis 1976).

Schools also inculcate young people into what Jay MacLeod (1987) calls the *achievement ideology*, which “maintains that individual merit and achievement are the fair and equitable sources of inequality in American society. If merit is the basis for the distribution of rewards, then *members of the lower classes attribute their subordinate position in the social order to personal deficiencies*” (p. 112-13, emphasis mine).

Students from disadvantaged backgrounds frequently face less access to high quality schooling and possess fewer resources to enable their success. Within the logic of the achievement ideology, the resulting lower success rate of students from disadvantaged backgrounds is attributed to personal shortcomings rather than structural inequalities. Most importantly, students from disadvantaged backgrounds themselves interpret their failures in school and later failures in the labor market as evidence that they are not smart enough, hardworking enough, etc. Furthermore, they reduce their *aspirations* – or their desires for the future given their assessment of their abilities and the larger opportunity structure (McLeod 1987). Aspirations combine an individual’s hopes for themselves with internalized observations about the probability that they will achieve certain outcomes. These “leveled aspirations” serve as an additional mechanism to reproduce the disadvantage experienced by already disadvantaged students.

In prevailing accounts of the relationship between academic and labor market success, there is no mention of those who meet the terms set out in the achievement ideology, doing well in high school and progressing to do well in college, but who

nevertheless meet with repeated failure in the labor market – even when the economy is good. There is widespread joblessness among people with disabilities in general, including those who have achieved academic success by any measure but who remain jobless or find themselves with undesirable jobs that may be at odds with their expectations for themselves. Do college-educated people with disabilities expect their degrees to grant them access to good jobs? If so, how do they interpret their failures? If findings from previous research on class differences in schooling hold, we should find that college-educated people with disabilities interpret their failures in the job market as the result of personal inadequacies rather than structural barriers (Hypothesis 2.3).

ECONOMIC SURVIVAL AND MATERIAL HARDSHIP AMONG JOBLESS ADULTS

The last set of research questions addressed in this dissertation focuses on the large group of people with disabilities who are not working. Because many of these people may not technically be in the labor market - whether because they do not want to work or they gave up looking - I refer to them as *jobless* rather than unemployed. The overarching research question that I raise is purely descriptive: *How do jobless people with disabilities accomplish economic survival?* That is, in a context where the majority of people support themselves through paid employment, how do those without jobs manage to support themselves financially and secure the basic necessities of life?

The existing literature on joblessness and economic survival is largely focused on how the perfect storm of economic restructuring, rising inequality, and welfare reform has affected members of the so-called underclass: welfare recipients (generally single

mothers), residents of poor neighborhoods, and the working poor. Although people with disabilities are frequently members of the underclass, this literature does not explicitly address people with disabilities. The major findings of this literature, however, are potentially generalizable to joblessness and economic survival among people with disabilities.

Scholarship in this area has achieved consensus on several key observations about the experience of joblessness and economic survival. First, that public assistance alone is generally not enough to make ends meet (Edin and Lein 1996, 1997), a fact which forces many welfare recipients to find supplemental income from sources like under-the-table work and informal support from family members and romantic partners. Second, that the kinds of jobs available under the new economy to those at the bottom of the occupational structure generally do not pay enough to lift incumbents out of poverty (Edin and Lein 1996, 1997; Newman 1999). Last, that strategies to achieve economic survival among the underclass are generally enacted at the household level, with some combination of public assistance receipt and low-paid work by household members (Newman 1999; Edin and Kefalas 2005).

While findings from this literature are clearly informative for understanding the experiences of economic survival and joblessness among people with disabilities, it should be noted that people with disabilities occupy a liminal position in the class structure. Whereas individuals with disabilities are more likely than people without disabilities to be poor and to live in households around or below the poverty line, and whereas developing a long-lasting physical or mental health condition is associated with downward social mobility, poverty does not always accompany disability nor is poverty

an inevitable outcome of disability onset. In one of the only studies to examine economic well-being and living arrangements among nonworkers with disabilities, Stewart (2006) found that, from 1967 to 1999, the share of working-age men who were jobless because of illness or disability rose from 1.9% of all men to 4.4% of all men. Relative to other jobless men, these men were among the most likely to receive unearned income from any source (most often, social security or disability benefits) and, if receiving any unearned income, they received more relative to men who were jobless for other reasons. However, men not working because of illness or disability also saw the smallest total per capita household income of all jobless men, with each household member realizing an income of approximately \$15,000 per year. Stewart's study does not capture the experiences of men (or women) with disabilities who report a different reason as the primary cause of joblessness, nor does he capture other features of economic survival, such as food security and housing adequacy.

SUMMARY

In this chapter, I provided historical background on social change for people with disabilities over the past 40 years. I also reviewed the interdisciplinary literature on economic inequality more generally and among people with disabilities in particular. People with disabilities have experienced changes leading to increased community inclusion, decreased stigma, and better educational outcomes. However, they face complex decisions about work posed by the structure of existing welfare state rules that compel them to reduce work hours or stop working completely in order to maintain cash

transfer and in-kind benefits. Furthermore, they also face pervasive employer discrimination that civil rights legislation has failed to ameliorate.

The existing literature indicates that people with disabilities experience considerable labor market inequality, manifest in depressed employment rates and disparities in pay. Although current evidence suggests the relationship between standard predictors of employment and the likelihood of employment may meaningfully differ for working-age people with disabilities, there has been little investigation into what those differences might be. Furthermore, investigations of wage inequality between workers with and without disabilities have largely remained at the individual level, without consideration of structural mechanisms that lead to pay gaps. Occupational sorting is a particularly powerful structural mechanism demonstrated to cause substantial pay gaps in other groups of marginalized workers, and which may also contribute to observed wage inequality for workers with disabilities.

Employment discrimination against people with disabilities is one of the primary mechanisms theorized to cause observed disparities in labor market outcomes. However, the majority of previous research only indirectly investigates discrimination against people with disabilities and fails to provide much information about the experiences of discrimination and the forms that persist. The literature that does exist finds that, while interpersonal discrimination against currently employed people with disabilities is widespread, factors at the organizational level tolerate or even encourage the persistence of discrimination against employees with disabilities.

Current approaches to studying the effects of social change on the employment of

people with disabilities evaluate the contributions of policy changes, welfare state expansions, and demographic changes to the observed decline in the disability employment rate over the 1990s. While these approaches are useful for evaluating the impacts of period effects on employment rates, they fail to capture the long-term impacts of social change on the employment of people with disabilities. Considering how successive cohorts of people with disabilities fare under changed social and political regimes presents an alternative approach, one which better highlights the impacts of improved education on employment rates in particular. Longitudinal trends expose a particularly troubling contradiction between increasing educational attainment and declining employment, making it important to understand how college-educated people with disabilities understand their labor market failures.

Finally, although employment rates are quite low among people with disabilities, little attention has been paid to the economic well-being of the large number of jobless adults with disabilities. Not only does an investigation of economic survival among jobless adults – consisting of obtaining adequate financial support and securing the basic necessities of life – provide important descriptive information about the economic well-being of people with disabilities, it allows us to gain insight into the question of whether work pays for people with disabilities by comparing the economic well-being of jobless adults with disabilities to employed adults with disabilities.

CHAPTER 3: DATA AND METHODS

In this chapter, I describe the data and methods used to address the research questions and hypotheses raised in Chapters 1 and 2. Each set of research questions and their corresponding hypotheses require different kinds of information, leading me to employ multiple data sources. The analyses presented in this dissertation use a pooled cross-sectional sample drawn from the 1996, 2001, and 2004 Surveys of Income and Program Participation (SIPP) panels, a pooled sample of the annual cross-sectional National Health Interview Surveys (NHIS) covering the period from 1969 to 2006, and information from key informant and in-depth interviews with people with disabilities living in Rhode Island and Massachusetts.

I present analyses of these data in the following four analytical chapters. Chapter 4 presents estimates of descriptive, binary logistic, OLS, and multilevel statistical analyses using the SIPP sample to 1) provide a portrait of those people with disabilities who work at a time when many people with disabilities do not; 2) investigate variations in how traditional predictors of participation in paid employment operate for working-age people with disabilities relative to their same-age peers without disabilities; 3) estimate the size of the earnings gap by disability status among full-time workers; and 4) examine the extent to which this wage gap can be explained by individual, intra-occupational, and inter-occupational differences. Chapter 5 presents the results of descriptive statistical

analyses and binary logistic fixed effects models using repeated cross-sections of the NHIS data in order to 1) describe trends in employment and educational attainment by disability status over the past forty-year period; and 2) explore whether the social changes occurring over the latter half of the twentieth century have changed the extent to which people with disabilities participate in paid employment by comparing the employment careers of five-birth cohorts born between 1905 and 1981 across time and age.

Chapter 6 presents descriptive statistical analyses of the pooled SIPP data to shed light on 1) how jobless people with disabilities achieve economic survival by examining their personal characteristics, sources and amounts of income, living arrangements, reasons for not working, and non-financial well-being (as measured by food security and housing adequacy); and 2) comparing how well jobless adults with disabilities are achieving economic survival when compared to jobless adults without disabilities and employed people with disabilities. Chapter 7 presents data from interviews that provide valuable insight into the mechanisms that contribute to disability labor market inequality, as well as information about experiences with discrimination and interpretations by college-educated people with disabilities about how well a college degree has served them in getting a job. Below, I discuss the data, methods, and key measures used in each chapter in turn.

CHAPTER 4: WHO WORKS AND HOW DO THEY COMPARE?

Data and Sample

This chapter uses a pooled cross-section of the 1996, 2001, and 2004 wave 5 modules of the Survey of Income and Program Participation (SIPP) collected by the U.S

Census Bureau, limited to the month in which the functional limitations topical module was asked. The SIPP contain a wide-ranging and detailed set of measures, including measures of demographic characteristics, educational attainment, individual and household-level earned and unearned income sources and amounts, the type and terms of employment, job characteristics (including three-digit occupation code), disability, household composition, and individual well-being along a number of economic and non-economic dimensions.

Questions about functional limitations are not asked until wave 5 of the panel, approximately 16 months since the first survey was fielded. Thus, the cross-sections included actually take place in 1997, 2002, and 2005. Participants were asked a series of questions about whether they have difficulties hearing or seeing, use an aid such as crutches or a walker to get around, and a standard set of questions about limitations in activities of daily living (ADLs), limitations in instrumental activities of daily living (IADLs), and functional limitations. Individuals reporting that they were limited in some way were then asked to name the primary condition causing their limitation(s) and when that condition first occurred.

The analyses reported in this chapter use two different analytical samples. The first sample – used for analyses investigating the characteristics of employed people with disabilities and whether and how conventional predictors of labor market incorporation – is limited to all men and women between 25 and 64 years of age with complete information on all analysis variables, yielding a sample size of 126,042 people. Of this sample, 16%, or 20,136 individuals, have disabilities. The second set of analyses, using the second analytical sample, estimate the disability wage gap for full-time workers

(defined as those working at least 35 hours per week) and the extent to which individual characteristics, intra-occupational and inter-occupational differences can explain the wage gap. These analyses are limited to workers employed full-time with at least \$1 in earnings, between the ages of 25 and 64, and who have complete information on all analytical variables. These limitations result in a sample size of 79,448 respondents, of whom 6,921, or 8.7%, have disabilities.

Methods

Binary logistic regression models

In Chapter 2, I propose several hypotheses about whether and how conventional predictors of participation in paid employment may differ by disability status. Binary logistic regression models allow me to test these hypotheses. I first explore the relationship between employment (defined as working at a job for pay at any time during the interview month) and a set of sociodemographic, human capital, household, and local labor market characteristics – covariates demonstrated to be important predictors of labor force participation - while controlling for the presence of any disability and the type of disability. I then add a set of interaction terms that allow the effect of each covariate to vary by disability status to estimate whether and how the direction and magnitude of each covariate behaves differently for people with disabilities than for people without disabilities. The main-effects model with a binary disability indicator is estimated as:

$$\text{logit(Employed)}_{ij} = \beta_0 + \beta_1(\text{Disability})_i + \beta_2(\text{Female})_i + \beta_3(\text{HS drop out})_i + \beta_4(\text{HS graduate})_i + \beta_5(\text{Some college})_i + \beta_6(\text{Age})_i + \beta_7(\text{Hispanic})_i + \beta_8(\text{Black})_i + \beta_9(\text{Other})_i + \beta_{10}(\text{Northeast})_i + \beta_{11}(\text{South})_i + \beta_{12}(\text{Midwest})_i + \beta_{13}(\text{Metro})_i + \beta_{14}(\text{Alone})_i + \beta_{15}(\text{\# of kids})_i + \beta_{16}(\text{Never married})_i + \beta_{17}(\text{Divorced})_i + \beta_{18}(\text{HH earnings})_i + \beta_{19}(\text{Year 2001})_i + \beta_{20}(\text{Year 2004})_i \quad (\text{Equation 1.1}).$$

OLS regression models

In addition to evaluating what seems to predict employment, chapter four also addresses one of the main research questions raised in this dissertation – Namely, how do working people with disabilities compare to their employed counterparts without disabilities? In order to do so, I produce estimates of the wage differential between workers with and without disabilities who are employed full-time. The rationale for focusing only on full-time workers is to avoid the issues raised by analysts working within the labor economics tradition around “productivity differentials” between people with and without disabilities, discussed in chapter two. Whereas these other analysts have tried to control away productivity differentials by decomposing disability measures into the portion due to individual (in)capability and the portion due to economic discrimination, I adopt a different approach here. By focusing solely on full-time workers in the wage analyses, I make the key assumption that any meaningful “productivity differentials” between workers with and without disabilities will lead individuals who have the most severe impairments to work part-time or to abstain from work altogether. If this assumption holds true, the estimated disability coefficient in models fit only to full-time workers will produce a fairly accurate estimate of other, non-productivity-related determinants of the disability wage gap.

I begin by producing an estimate of the “raw” disability wage gap, unadjusted for differences that may exist between respondents with and without disabilities. The amount of variation unexplained in this model is taken as the baseline comparison (the denominator) for calculating the percentage of the variance explained by subsequent models. I then include the same set of individual-level predictors controlled for in the

binary logistic regression model discussed above, producing a revised estimate of the disability wage gap and a summary of how much variation this standard set of covariates explains. This “individual-level” model is estimated as follows:

$$\ln(\text{Weekly wage})_{ij} = \beta_0j + \beta_1j(\text{Disability})_{ij} + \beta_2j(\text{Female})_{ij} + \beta_3j(\text{HS drop out})_{ij} + \beta_4j(\text{HS graduate})_{ij} + \beta_5j(\text{Some college})_{ij} + \beta_6j(\text{Age})_{ij} + \beta_7j(\text{Hispanic})_{ij} + \beta_8j(\text{Black})_{ij} + \beta_9j(\text{Other})_{ij} + \beta_{10j}(\text{Northeast})_{ij} + \beta_{11j}(\text{South})_{ij} + \beta_{12j}(\text{Midwest})_{ij} + \beta_{13j}(\text{Metro})_{ij} + \beta_{14j}(\text{Alone})_{ij} + \beta_{15j}(\text{\# of kids})_{ij} + \beta_{16j}(\text{Never married})_{ij} + \beta_{17j}(\text{Divorced})_{ij} + \beta_{18j}(\text{HH earnings})_{ij} + \beta_{19j}(\text{Year 2001})_{ij} + \beta_{20j}(\text{Year 2004})_{ij} + r_{ij} \text{ (Equation 1.2).}$$

Although some of the variables, such as region or household income, are not technically individual-level, they tell us little about the jobs that workers with disabilities hold in the overall occupational structure or about how well workers with disabilities are doing relative to workers without disabilities who have the same jobs. Therefore, I refer to this model as an individual-level model to juxtapose it with subsequent models that also consider each individual’s position in the overall occupational structure as well as any individual or household-level characteristics.

Next, I include a set of dummies for occupation (there are 486 occupational categories in this analysis) to investigate how much additional variation in the disability wage gap is explained by differential sorting into occupations by disability status. Scholars of gender and employment in particular have found that women systematically work in different types of occupations than men do, and that this differential “occupational sorting” into different positions in the occupational structure contributes significantly to gender gaps in earnings. Adding occupational dummies allows me to

estimate how much of the gap in wages by disability status is due to a similar type of mechanism.

Simply adding occupational dummies, however, does not estimate the extent to which the disability earnings gap varies between occupations; that is, controlling for differential sorting into occupations will not tell us about whether workers with disabilities are paid significantly less compared to workers without disabilities within the same occupation. Fitting such a model with OLS would require estimating a model with a very large number of parameters. Instead, fitting a random coefficient multilevel model would produce a much more parsimonious specification that would yield very similar estimates without the large computational burden.

Multilevel regression models

In addition to the fixed effects OLS model with occupational dummies, I also estimate a random intercept model and a random coefficient model. The following methodological strategy applies Grodsky and Pager's (2001) approach to evaluating the contributions of occupation to black-white earnings inequality to the case of disability earnings inequality. In their study, Grodsky and Pager confirm and build on the findings that, in the lowest-paid occupations, Blacks actually earn more than Whites, but that this gap reverses and *widens* as occupational earnings increase. Thus, Blacks in more well-paid occupations certainly earn more than Blacks in lower-paying occupations, but the inequality in pay they face compared to their White colleagues is far greater than Blacks in lower-paid occupations face relative to their White colleagues. Applying Grodsky and Pager's empirical strategy here will allow us to develop a much fuller understanding of

what differences in occupational sorting and in the direction and extent of disability wage inequality across occupations look like for workers with disabilities.

The random intercept model predicts full-time earnings as a function of individual-level characteristics at level one, allowing for occupational clustering at level two. This model assumes that the relationship between earnings and all level-one predictors – including disability – is constant across occupations, but that there is a substantial difference in earnings between occupations. Thus, it estimates an additional, occupation-specific intercept to shift earnings estimates up or down after controlling for level-one predictors. This model is estimated as follows:

$$\ln(\text{Weekly wage})_{ij} = \gamma_{00} + \beta_{1j}(\text{Disability})_{ij} + \beta_{2j}(\text{Female})_{ij} + \beta_{3j}(\text{HS drop out})_{ij} + \beta_{4j}(\text{HS graduate})_{ij} + \beta_{5j}(\text{Some college})_{ij} + \beta_{6j}(\text{Age})_{ij} + \beta_{7j}(\text{Hispanic})_{ij} + \beta_{8j}(\text{Black})_{ij} + \beta_{9j}(\text{Other})_{ij} + \beta_{10j}(\text{Northeast})_{ij} + \beta_{11j}(\text{South})_{ij} + \beta_{12j}(\text{Midwest})_{ij} + \beta_{13j}(\text{Metro})_{ij} + \beta_{14j}(\text{Alone})_{ij} + \beta_{15j}(\text{\# of kids})_{ij} + \beta_{16j}(\text{Never married})_{ij} + \beta_{17j}(\text{Divorced})_{ij} + \beta_{18j}(\text{HH earnings})_{ij} + \beta_{19j}(\text{Year 2001})_{ij} + \beta_{20j}(\text{Year 2004})_{ij} + u_{0j} + r_{ij} \text{ (Equation 1.3)},$$

where γ_{00} represents the expected value of weekly wages when all predictor variables are zero, and u_{0j} represents the variability between occupations. Similar to the fixed-effects OLS model specification, the random intercept model produces an estimate of the disability wage gap that accounts for the fact that workers with disabilities may be routinely employed in different occupations than workers without disabilities, without accounting for the possibility that the relationship between earnings and disability might also differ across occupations. For example, the random intercept model takes into account that medical doctors earn more than cashiers, and that people with disabilities are more likely to work as cashiers than as medical doctors. However, it does not account for

the possibility that the earnings of cashiers with disabilities may be at parity with the earnings of cashiers without disabilities, but that the earnings of medical doctors with disabilities may be substantially less than the earnings of medical doctors without disabilities. The random coefficient model allows us to account for this possibility.

In the random coefficient model, I allow the relationship between earnings and disability to vary across occupations by including disability as both a fixed and random effect. This model (also referred to as a “slopes-as-outcomes” model) is estimated as follows:

$$\ln(\text{Weekly wage})_{ij} = \gamma_{00} + \gamma_{10}(\text{Disability})_{ij} + \beta_{2j}(\text{Female})_{ij} + \beta_{3j}(\text{HS drop out})_{ij} + \beta_{4j}(\text{HS graduate})_{ij} + \beta_{5j}(\text{Some college})_{ij} + \beta_{6j}(\text{Age})_{ij} + \beta_{7j}(\text{Hispanic})_{ij} + \beta_{8j}(\text{Black})_{ij} + \beta_{9j}(\text{Other})_{ij} + \beta_{10j}(\text{Northeast})_{ij} + \beta_{11j}(\text{South})_{ij} + \beta_{12j}(\text{Midwest})_{ij} + \beta_{13j}(\text{Metro})_{ij} + \beta_{14j}(\text{Alone})_{ij} + \beta_{15j}(\text{\# of kids})_{ij} + \beta_{16j}(\text{Never married})_{ij} + \beta_{17j}(\text{Divorced})_{ij} + \beta_{18j}(\text{HH earnings})_{ij} + \beta_{19j}(\text{Year 2001})_{ij} + \beta_{20j}(\text{Year 2004})_{ij} + u_{0j} + u_{1j}(\text{Disability})_{ij} + r_{ij} \text{ (Equation 1.4),}$$

where γ_{10} represents the fixed-effect estimate of the impact of disability on earnings and u_{1j} represents the variability between occupations in the estimate of disability. Note that we have effectively decomposed the effect of disability into a fixed component and a random, occupation-specific component, so that $\beta_{1j} = \gamma_{10} + u_{1j}$.

Last, in order to investigate whether the disability wage gap widens as occupations become better-paying (as is the case for the black-white wage gap), exhibits a different pattern, or reveals no pattern at all, I regress the estimated occupation-specific disability wage gap on the average occupation-specific earnings of workers without disabilities. Estimating the occupation-specific portion of the disability wage gap (u_{1j}) requires some additional legwork. When we estimate the random intercept and random

coefficient models, we do not actually directly estimate the random intercept (u_{0j}) or random coefficient (u_{1j}). Typically, when analysts use multilevel models, they are interested in obtaining unbiased estimates of the level-one parameters, thus treating higher order clustering as a nuisance to be adjusted away. In this case, however, we are interested in whether and how the estimate of the disability wage gap changes across the occupational spectrum. Thus we need a way to estimate both the fixed and random portions of the occupation-specific disability wage gap (β_{1j}). To do so, we can generate empirical Bayes estimates (also known as “shrinkage estimates”) of β_{1j} . I then use these estimates of the occupation-specific disability wage gap to assess the direction and magnitude of the gap across occupational earnings.

Key Measures

I use two versions of disability in this chapter. The first is a measure of disability type based on the impairment listings used by the Social Security Administration (SSA) to determine eligibility for SSA disability cash benefits (SSA n.d.). This version is only used in the binary logistic regression models predicting employment. I use fewer disability categories than SSA’s full listings because certain categories of impairment have few cases (for example, malignant neoplastic or digestive impairment groupings). I retained impairment categories comprising at least 5% of people with disabilities, leaving me with the following mutually exclusive and exhaustive categories: mental, immune system, musculoskeletal, sensory, other, and no disability (please refer to Table 3.1 below for the full listing of conditions included in each impairment category). I add the additional restriction that impairments had to have lasted at least one year at the time of the wave 5 survey in order to distinguish temporary injuries from disabilities. Other

authors have used versions of the SSA impairment groups to examine trends and some have found important differences by disability type (for example, see Autor and Duggan 2003; Hotchkiss 2003). The second version of disability, used in analyses comparing people with disabilities to people without disabilities, is a single, dichotomous measure that has a value of 1 if individuals have a health condition that limits their activities in at least one life area and has lasted for at least one year. I use the binary disability measure in the logistic regression models predicting employment and the later OLS and multilevel models predicting weekly earnings.

Table 3.1 SSA Disability Type Definition

Mental	Immune System	Musculoskeletal	Sensory	Other
Alcohol or drug problem or disorder	AIDS or AIDS related condition	Back or spine problem (including chronic stiffness and deformity)	Blindness or vision problems	Cancer
Learning disability	Arthritis or rheumatism		Deafness or hearing problems	Cerebral palsy
Mental or emotional problem or disorder		Broken bone/ fracture	Speech disorder	Diabetes
Mental retardation		Head or spinal cord injury		Epilepsy
Senility/Dementia/ Alzheimer's disease		Hernia or rupture		Heart trouble
		Missing legs, feet, arms, hands, or fingers		High blood pressure
		Paralysis of any kind		Kidney problems
		Stiffness or deformity of the leg, foot, arm or hand		Lung or respiratory problems
				Stomach trouble (including ulcers, gallbladder, or liver condition)
				Stroke
				Thyroid trouble or goiter
				Tumor, cyst, or growth
				Other

Two outcomes are modeled in this chapter. The first is a binary indicator of whether the respondent was employed at any time during the reference month (the month in which respondents completed the wave 5 module), which takes a value of 1 if the respondent was working for pay and 0 if they were not working for any reason. This definition includes both those who were looking for work and those who were not looking for work for any reason, so the definition of employment here is actually a measure of having a paying job versus being jobless. The second outcome modeled in this chapter is logged weekly earnings, deflated using the Consumer Price Index (CPI) into 2007 dollars. I use weekly rather than hourly earnings because the way in which the SIPP collected information about the number of hours worked per week was inconsistent over the three panels and did not allow me to accurately calculate hourly earnings.

I use four sets of individual-level predictors derived from previous research on employment participation: sociodemographic characteristics, human capital, household characteristics, and residential characteristics. Sociodemographic characteristics included in the multivariate analyses include age (centered), race (non-Hispanic white, black, non-Hispanic other, and Hispanic), and sex. Human capital is measured by using education measured in categories (less than high school, high school graduate, some college, or four-year degree or more). Household characteristics include marital status (currently married, previously married, or never married), whether respondents live alone, number of own co-resident children under age 18, and earnings of other household members in this analysis. Other household earned income is measured as total household earned income for the month minus the focal individual's earned income for the month, deflated

using the CPI into 2007 dollars. Residential characteristics include region (Northeast, South, Midwest, and West) and whether or not they live in a metro area.

Occupation is measured using three-digit occupational categories that approximate the O*NET occupational coding scheme deployed to replace the Dictionary of Occupational Titles (DOT). Combining the three SIPP panels provided some challenges to measuring occupation because the 1996 and 2001 panels used the DOT codes, whereas the 2004 panel used the new O*NET codes. The cross-walk between the two coding schemes is not exact and some differences between the schemes created considerable difficulties in creating a standardized cross-walk between the two. For example, in the DOT coding scheme, K-12 teachers are classified according to the subject they teach (science, math, etc.) without reference to the level at which they teach, but in the O*NET scheme, they are classified according to the level at which they teach (primary, secondary, etc.) without reference to the subject taught. To the greatest extent possible, I converted the DOT codes into the new O*NET three-digit codes. When this was not possible, I created new categories or collapsed existing categories in order to completely standardize occupational codes across the three years. This cross-walk exercise yielded 486 unique occupational categories. More information on the occupational coding cross-walk I developed is available in the Appendix.

CHAPTER 5: ASSESSING THE NET EFFECTS OF SOCIAL CHANGE ON DISABILITY EMPLOYMENT

Data and Sample

This chapter uses a pooled sample of the 1969-2006 National Health Interview Surveys (NHIS) (MPC 2008). The NHIS is a nationally representative cross-sectional

survey conducted annually by the U.S. Census Bureau on behalf of the Centers for Disease Control and Prevention. Beginning in 1957 and continuing through the present day, it is the longest running data series tracking trends in disability and health among the American people. In addition to information on disability and health, the NHIS contain data on demographic and socioeconomic characteristics, including race, education, and employment status.

The period from 1969 through 2006 captures an historical period spanning several important social, political, and economic events in the lives of Americans with disabilities. In particular, it captures de-institutionalization and the disability rights movement; the passage of the Vocational Rehabilitation Act, IDEA, and the ADA; and welfare state expansions through the enactment of SSI, the SSA disability retrenchment and liberalization of the early 1980s, and the expansion of SSI and DI eligibility to children in the early 1990s. The extension of this data series into the 21st century allows us to trace these trends closer to the present day. The sample is limited to working-age individuals (ages 25-64) with complete information on all variables, and who did not identify with a racial or ethnic group besides Black/African American or White. I am unable to distinguish whether sample members are non-Hispanic White or not across the entire time series. This last constraint is imposed to ensure measurement consistency across the entire time series. These limitations yield a sample size of 1,853,705 respondents: 304,937, or 16.5% with disabilities, and 1,548,768 without disabilities.

Methods

Descriptive statistics

Because trends in employment by disability status are typically presented for relatively short periods of time (spans of approximately 20 years or less), and tend to focus on the 1980s forward, I spend some time in this chapter describing historical trends in employment and educational attainment for the 1969-2006 period by disability status. Estimated employment rates are population weighted¹ and, in order to ensure the greatest comparability over time, they are also age-standardized using the population distribution of those aged 25 to 64 from the 2000 U.S. Census. Additionally, because birth cohort is the primary time unit of interest in this chapter, I also present employment rates over time for selected birth cohorts to illustrate how employment rates and rates of educational attainment may differ by birth cohort over the same time span.

Binary logistic regression models

This chapter tests two competing hypotheses, one predicting that social changes taking place over the latter half of the 20th century exerted positive effects on employment, leading to an increase in employment rates for each successive birth cohort and perhaps even a narrowing of the gap in employment rates by disability status; the other hypothesis predicting that social changes have dampened employment rates, leading to a decrease in employment rates for each successive birth cohort and contributing to a widening of the disability employment gap.

¹ Several sampling strata in the 1995 and 1996 survey years had only one primary sampling unit, which causes Stata to suppress standard error estimates when using the svy suite of commands. This problem affects 55,895 cases. As a solution, I created two artificial primary sampling units and randomly assigned the affected cases to one or the others.

To test these hypotheses, I fit four nested binary logistic regression models. The first model – the baseline model – predicts employment as a function of individual-level predictors, including disability status, demographic characteristics and education. The second model builds on the first by adding a set of interaction terms between disability and all individual-level predictors, thus allowing the relationship between each predictor and employment to vary by disability status. The third model specification adds a set of dummy variables for birth cohort. The birth cohort dummies capture variation in employment that is attributable to the unique social environments faced by each cohort, such as the increased share of people pursuing postsecondary education, changing expectations around female labor force participation, and so on. The fourth model adds interaction terms between disability and the birth cohort dummies. These interaction terms capture the additional variation that can be explained by the unique circumstances faced by successive birth cohorts of people with disabilities in particular, such as civil rights legislation, deinstitutionalization, expanded social welfare benefits, and increased inclusion in schools and communities. The final, fully-interacted model can be written as:

$$\begin{aligned} \text{logit}(\text{Employed})_{ij} = & \beta_0 + \beta_1(\text{Disability})_i + \beta_2(\text{Female})_i + \beta_3(\text{More than HS education})_i + \\ & \beta_4(\text{Age})_i + \beta_5(\text{Age}^2)_i + \beta_6(\text{Black})_i + \beta_7(\text{Post-1996})_i + \beta_8(1910)_i + \dots + \beta_{23}(1980)_i + \\ & \beta_{24}(\text{Disability} \times \text{Female})_i \dots + \beta_{39}(\text{Disability} \times \text{Post-1996})_i + \beta_{40}(\text{Disability} \times 1910)_i + \dots \\ & + \beta_{55}(\text{Disability} \times 1980)_i \text{ (Equation 2.1).} \end{aligned}$$

Key Measures

The outcome variable modeled is working for pay in the week prior to the survey, coded as 1 if the individual was employed and 0 otherwise. As with the models predicting employment in the previous chapter, the distinction made here is between those with a

paying job and those who are jobless, combining the unemployed with those out of the labor force altogether into the jobless category.

Disability is measured as a binary variable coded as 1 if the individual reported any functional limitation at the time of the survey and 0 if they reported none or it was unknown whether they had a functional limitation. Unknown cases are categorized with no functional limitations here because the NHIS did not distinguish between the two consistently across the entire time series. Age is measured as a continuous variable centered around the overall mean age and age squared is the square of uncentered age. Sex is coded as 1 if the respondent is female and 0 if he is male, and race is coded as 1 if the respondent is Black/African American and 0 if the respondent is White. Education is measured as a dichotomous variable, coded as 1 if the individual had completed more than a high school education and 0 otherwise. An indicator variable for whether the survey year is 1996 or earlier, or after 1996 is also included in the models. The indicator variable incorporates historical trends affecting overall employment chances, as well as the effect on the measured relationship due to a change in the sampling frame starting with the 1997 survey. Cohort is measured with 16 five-year birth cohorts: 1905-09, 1910-14, 1915-19, 1920-24, 1925-29, 1930-34, 1935-39, 1940-44, 1945-49, 1950-54, 1955-59, 1960-64, 1965-69, 1970-74, 1975-79, and 1980-81 (this last truncated because only part of the birth cohort was 25 or older).

CHAPTER 6: ECONOMIC SURVIVAL, INCOME ADEQUACY AND MATERIAL HARDSHIP

In this chapter, I present descriptive statistical analyses of a sample of working-age people drawn from the pooled 1996, 2001, and 2004 SIPP data discussed above.

Data, Sample, Measures, and Methods: Descriptive Statistical Analyses

In this chapter, I address research questions about whether and how jobless people with disabilities accomplish economic survival. I consider two broad dimensions of economic survival: the first is related to income adequacy and the second is related to experiences of material hardship. The data used to answer this question are somewhat different from those used in Chapter 4. Whereas information on disability was collected in wave 5 for all three panel years, information on material hardship was collected in wave 5 for the 2004 panel and in wave 8 for the 2001 and 1996 panels. I limit the sample to respondents aged 25-64 with complete information on income, living arrangements, disability, and measures of material hardship. These limitations yield a sample size of 34,799: 9,783 jobless adults with disabilities, and 15,111 jobless adults without disabilities, and 9,905 employed adults with disabilities.

Although income adequacy (typically measured with respect to the poverty line) is related to material hardship (usually measured with food security), the association is only partial, with several studies observing a substantial number of households with incomes above what is traditionally considered low-income (generally measured as below 200% of the federal poverty line) experiencing material hardship (Boushey et al. 2001; Hamilton et al. 1997; Short 2005). To investigate income adequacy, I examine the sources and amounts of unearned income, and the amount of earnings contributed by other household members. I first compare jobless adults with and without disabilities, and employed adults with disabilities, in terms of total personal and household income in order to place individuals within their overall household economic contexts.

I then describe how the type and amount of personal unearned income varies by disability status for jobless adults and, within disability status, how they vary by living arrangements (single, living with spouse, living with parents (no spouse present), and living with other relatives or friends (no spouse present)), primary reason for not working, and selected sociodemographic characteristics (educational attainment, sex, and race/ethnicity). Sources of unearned income are categorized into asset income (from interest, dividends, and rental income), disability income (worker's compensation, disability insurance, Social Security Disability Insurance (SSDI), and Supplemental Security Income (SSI)), retirement income, unemployment compensation, and other sources of unearned income (including veteran's benefits, survivor benefits, child support, etc.). To investigate the sources of potential financial support from other household members, I also describe the total earned and unearned income of all other household members as an average and as a per capita amount, divided by all other household members. Sample members living alone are excluded from these statistics. Last, I also investigate how crucial the respondent's income is to overall household economic survival by summarizing respondents' total personal income as a percentage of total income for the household. By definition this percentage is 100% for sample members living alone.

To measure material hardship, I include measures of material hardship utilized by Heflin, Sandberg, and Rafail (2009) in their four-dimensional model of material hardship. The four dimensions of their model encompass 1) food hardship, in which any or all household members experience insufficient or marginally sufficient food; 2) bill-paying hardship, in which any or all household members face difficulties paying utility and/or

housing bills in full and on time; 3) health hardship, where any or all household members experience unmet need for health care; and 4) housing hardship, where household members live in substandard homes.

Food hardship is measured with three items from the SIPP. The first asks respondents to describe the state of food eaten in their household in the past four months (enough of the kinds of food we want, enough but not always the kinds of food we want to eat, sometimes not enough to eat, or often not enough to eat). The second asks respondents to indicate whether the statement “The food that (I/WE) bought just didn’t last and (I/WE) didn’t have money to get more” was often true, sometimes true, or never true of the past four months, and the third asks respondents to similarly evaluate the statement “(I/WE) couldn’t afford to eat balanced meals.”

Bill-paying hardship is measured with three items from the SIPP, the first asking about whether respondents were unable to pay the full amount of their rent or mortgage any time in the past 12 months, the second asking about whether respondents were unable to pay the full amount of their gas, oil or electricity bills in the past 12 months, and the third asking about whether the telephone company had disconnected their phone service because of nonpayment in the past 12 months. Health hardship is measured with two items, one asking about unmet need for dental care in the past 12 months and the other asking about unmet need for medical care in the past 12 months. Heflin and colleagues (2009) also include no insurance coverage but report that this item loaded poorly on any of their factors, including the health hardship factor, so I exclude it here.

Housing hardship is based on five items from the SIPP. The first asks whether respondents experience problems with pests such as rats, mice, roaches, or other insects.

The second asks whether respondents have broken windows, and the third asks whether the respondent's dwelling has nonfunctioning plumbing, such as a broken toilet, hot water heater, or other plumbing. The fourth asks whether the respondent's home has holes or cracks in the wall or ceiling wider than the edge of a dime, and the last asks whether respondent's homes have holes in the floor big enough for someone to catch their foot on.

I describe the prevalence of material hardship along each of these measures among jobless adults with disabilities, jobless adults without disabilities, and employed adults with disabilities.

CHAPTER 7: MECHANISMS OF LABOR MARKET INEQUALITY AND EXPERIENCES OF DISCRIMINATION

Data, Sample, and Methods: In-depth Interviews

I conducted a total of 25 interviews, 14 with working-age people with disabilities (between 18 and 64) and 11 with key informants working in non-profit organizations and government agencies serving people with disabilities (and who sometimes also had disabilities themselves). I used snowball sampling to recruit interview participants. Informants were considered to have a disability if they or anyone else would consider them to have a disability, and/or they received services or benefits on the basis of disability. I conducted interviews with informants in a variety of locations, encouraging them to choose a place they felt comfortable, including offices, private homes, coffee shops, and restaurants. Interviews lasted approximately 1 to 1 ½ hours. At their request, I interviewed two people twice because they felt they had more to say when we came to the end of the time we had allotted for the original interview. I treated these interviews as

a continuation of the first interview, using it as an opportunity to follow up on themes discussed during the original interview. The initial interview schedule is included in the appendix.

As mentioned in the introduction to this dissertation, I also conducted participant observation at workshops and job fairs targeted at people with disabilities, and collected textual and audiovisual materials produced by disability non-profits, state vocational rehabilitation agencies, ADA compliance offices, and the Social Security Administration about disability and employment. Although I do not report on those in this dissertation, I used them as a way to validate the data I collected in the interviews and check the conclusions I formed based on the interview data. I also used key informant interviews for this purpose. Although the people with disabilities I spoke with represent a small and selective group, the key informants I spoke with had been in the field of disability for at least 5 years and, in the case of several, for more than 30 years. As I was forming preliminary conclusions based on interviews, I asked questions of key informants to check and modify these conclusions and understand the limits of their generalizability.

The purpose of the qualitative data collection effort was to uncover themes related to the experience of joblessness and economic survival, understand how individuals explain joblessness within a culture that places great value on employment, and reveal mechanisms contributing to relationships observed in the quantitative analyses of disability and employment. Thus, the data collection strategies undertaken have a strongly exploratory bent. The interviews were very loosely structured around a predetermined list of topics and interviews were largely conducted as open-ended conversations that touched on employment, schooling, public assistance receipt, sources

of formal and informal support, and anything else that respondents wanted to discuss. Information and themes that I uncovered in earlier interviews colored the kinds of questions and lines of inquiry I pursued in later interviews. Although interviews yielded information on a broad array of topics, for this chapter, I focus more narrowly on narratives that 1) shed light on potential mechanisms that underpin the relationships observed in previous empirical chapters, and 2) the experiences and meanings of joblessness for people with disabilities. In particular, I examine how employers discriminate against job applicants with disabilities in the context of civil rights legislation prohibiting such discrimination, describe some of the mechanisms of occupational sorting faced by people with disabilities, and explore whether and why a college education appears to be unable to overcome employment barriers posed by discrimination, public benefit rules, and occupational sorting.

CHAPTER 4: WHO WORKS AND HOW DO THEY COMPARE?

The analyses presented in this chapter address questions about how well-established predictors of employment differ by disability status and whether and how the earnings of full-time workers with disabilities differ from full-time workers without disabilities.

DESCRIPTIVE RESULTS

There are multiple statistically significant differences between working-age people with disabilities and working-age people without disabilities. People with disabilities are less likely to work, and when they work, they are more likely to work part-time relative to workers without disabilities. They earn less per week and are significantly different on many characteristics related to work and earnings. Eighty four percent of people without disabilities are employed, compared to 54% of people with disabilities (refer to Table 4.1). Twenty five percent of workers with disabilities work in part-time positions (defined as working fewer than 35 hours per week) and 75% work full-time, whereas 15% of workers without disabilities work part-time and 85% work full-time. The average worker with disabilities earns approximately \$165 per week and the average worker without disabilities earns about \$218, a difference of \$53 per week.

Table 4.1 Distribution of Population Characteristics by Disability Status

	Has Disability	No Disability
	Mean (SE)	Mean (SE)
Employed***	0.543 (0.005)	0.843 (0.001)
Of those working		
Employed part-time***	0.254 (0.006)	0.150 (0.001)
Employed full-time***	0.746 (0.006)	0.850 (0.001)
Weekly wages*** (2007 dollars)	\$165.212 (2.384)	\$217.509 (1.072)
Disability type		
Mental	0.078 (0.003)	---
Immune system	0.124 (0.003)	----
Musculoskeletal	0.353 (0.005)	---
Sensory	0.086 (0.003)	---
Other	0.357 (0.004)	---
Female***	0.561 (0.005)	0.499 (0.002)
Age***	48.544 (0.084)	41.911 (0.035)
Education		
HS drop out***	0.185 (0.004)	0.098 (0.001)
HS graduate***	0.342 (0.004)	0.288 (0.002)
Some college**	0.329 (0.005)	0.316 (0.002)
College graduate***	0.144 (0.003)	0.299 (0.002)
Race/Ethnicity		
Hispanic*	0.113 (0.003)	0.120 (0.001)
Black***	0.145 (0.003)	0.108 (0.001)
Other	0.060 (0.002)	0.060 (0.001)
White***	0.682 (0.005)	0.712 (0.002)
Region		
Northeast*	0.180 (0.004)	0.188 (0.001)
South	0.356 (0.005)	0.354 (0.002)
Midwest	0.230 (0.004)	0.228 (0.001)
West	0.225 (0.004)	0.224 (0.001)
Lives in a metro area***	0.748 (0.004)	0.799 (0.001)
Lives alone***	0.150 (0.003)	0.105 (0.001)
No. of children under 18***	1.018 (0.011)	1.121 (0.004)
Marital Status		
Never married***	0.252 (0.004)	0.170 (0.001)
Divorced, widowed, or		
Separated***	0.240 (0.004)	0.160 (0.001)
Married***	0.508 (0.005)	0.670 (0.002)
Earned income from other household members***	\$2,019.874 (30.646)	\$2,871.269 (15.358)
N	20,136	105,906

Note: All means are population-weighted and age-adjusted using the 2000 U.S. Census (except for age);

*p<0.05, **p<0.01, ***p<0.001

People with disabilities are also significantly more likely to be female, older (approximately 7 years older on average), to have dropped out of high school (19% vs. 10%) or have completed only a high school education (34% vs. 29%), to be Black (15% vs. 11%), to live alone (15% vs. 11%), to never have married (25% vs. 17%) or to have been previously married (24% vs. 16%). They are also less likely to have graduated from college (14% vs. 30%), be Hispanic (11% vs. 12%), live in a metropolitan area (75% vs. 80%), or be currently married (51% vs. 67%). They also have slightly fewer children under 18, on average, and have earnings from other household members that are \$800 per month less, on average. Other differences are not statistically significant.

BINARY LOGISTIC REGRESSION RESULTS PREDICTING EMPLOYMENT

All of the models presented in Table 4.2 predict the log odds of employment, but the model results presented in the first column break disability down into type (based on the Social Security Administration disability categories), whereas the results presented in the second column measure disability as an overall binary variable representing any functional limitation resulting from a health condition that has lasted at least one year. The model results in the third column include interaction terms between all predictors and the binary disability variable. Although interactions between all variables and disability were considered, to simplify the table display, only interactions that were statistically significant are shown in the table. For a more straightforward interpretation, I will discuss all model results in terms of odds ratios in the text.

Table 4.2 Binary Logistic Regressions Predicting Employment

	Disability Type (M1)	Binary Disability (M2)	Binary Disability Interactions (M3)
	b (s.e.)	b (s.e.)	b (s.e.)
Main Effects			
Intercept	3.510*** (0.068)	3.503*** (0.063)	3.578*** (0.074)
Disability (any) Type	---	-1.453*** (0.020)	-1.595** (0.143)
Mental	-2.612*** (0.078)	---	---
Immune System	-1.030*** (0.041)	---	---
Musculoskeletal	-1.345*** (0.029)	---	---
Sensory	-0.565*** (0.064)	---	---
Other	-1.453*** (0.028)	---	---
No disability	Ref.	---	---
Female	-0.931*** (0.018)	-0.952*** (0.018)	-1.201*** (0.022)
Education			
HS drop out	-0.645*** (0.026)	-0.666*** (0.026)	-0.615*** (0.032)
HS graduate	Ref.	Ref.	Ref.
Some college	0.389*** (0.021)	0.393*** (0.021)	0.383*** (0.025)
College graduate	0.642*** (0.024)	0.641*** (0.024)	0.566*** (0.027)
Age	-0.031*** (0.001)	-0.031*** (0.001)	-0.030*** (0.001)
Race/Ethnicity			
Hispanic	-0.092*** (0.029)	-0.098** (0.029)	-0.111** (0.033)
Black	-0.195*** (0.027)	-0.200*** (0.026)	-0.127*** (0.032)
Other	-0.262*** (0.035)	-0.277*** (0.035)	-0.292*** (0.039)
White	Ref.	Ref.	Ref.
Region			
Northeast	-0.044 (0.027)	-0.048 (0.027)	-0.027 (0.031)
South	-0.061** (0.023)	-0.061** (0.023)	-0.018 (0.027)
Midwest	0.137*** (0.026)	0.134*** (0.026)	0.138*** (0.030)
West	Ref.	Ref.	Ref.
Lives in metro area	-0.040 (0.021)	-0.045* (0.021)	-0.049 (0.025)
Lives alone	0.284*** (0.034)	0.289*** (0.034)	0.382*** (0.046)
Number of children under 18	-0.073*** (0.008)	-0.075*** (0.008)	-0.088*** (0.008)
Marital Status			
Never married	-0.198*** (0.028)	-0.227*** (0.027)	-0.166*** (0.032)
Divorced, widowed, or separated	0.188*** (0.026)	0.183*** (0.026)	0.313*** (0.034)
Married	Ref.	Ref.	Ref.
Earned income from other HH members	0.026*** (0.003)	0.026*** (0.003)	0.024*** (0.003)
Panel Year			
1996	Ref.	Ref.	Ref.
2001	-0.186*** (0.021)	-0.175*** (0.021)	-0.179*** (0.024)
2004	-0.123*** (0.020)	-0.120*** (0.020)	-0.071** (0.023)

Table 4.2 Binary Logistic Regressions Predicting Employment (continued)

	Disability Type (M1)	Binary Disability (M2)	Binary Disability Interactions (M3)
	b (s.e.)	b (s.e.)	b (s.e.)
Selected Interactions with Binary Disability			
Female	---	---	0.938*** (0.041)
Education			
HS drop out	---	---	-0.140* (0.059)
HS graduate	---	---	Ref.
Some college	---	---	0.031 (0.047)
College graduate	---	---	0.403*** (0.061)
Age	---	---	-0.006** (0.002)
Race/Ethnicity			
Hispanic	---	---	-0.027 (0.074)
Black	---	---	-0.292*** (0.061)
Other	---	---	0.093 (0.082)
White	---	---	Ref.
Region			
Northeast	---	---	-0.063 (0.062)
South	---	---	-0.185** (0.053)
Midwest	---	---	-0.012 (0.058)
West	---	---	Ref.
Number of children under age 18	---	---	0.076*** (0.019)
Marital Status			
Never married	---	---	-0.296*** (0.064)
Divorced, widowed, or Separated	---	---	-0.444*** (0.056)
Married	---	---	Ref.
Earned income from other HH members	---	---	0.023*** (0.006)
Panel Year			
1996	---	---	Ref.
2001	---	---	-0.007 (0.049)
2004	---	---	-0.193*** (0.046)
N	126,042	126,042	126,042
F-statistic (df)	563.4788 (24)	673.3688 (20)	348.631 (39)

Note: *p < 0.05, **p < 0.01, ***p < 0.001; Models are adjusted for complex sampling design.

Although all people with disabilities are significantly less likely to work relative to people without disabilities, the magnitude of the negative relationship between

disability and employment varies somewhat by disability type. Those with mental disabilities are the least likely to work (93% less likely), followed by people with other types of disabilities (77% less likely), people with musculoskeletal disabilities (74% less likely), immune disabilities (64% less likely), and sensory disabilities (43% less likely). When we consider the impact of having any disability, we also observe a large, statistically significant, and negative relationship with employment. Overall, working-age people with disabilities are 77% less likely, net of other factors, to work for pay.

Consistent with other work on employment, women are significantly less likely to work than men (roughly 60% less) and higher levels of educational attainment are positively associated with employment. Those with less than a high school education are approximately 50% less likely to work (relative to those who completed a high school education), and those with some college and at least a four-year college degree are 48% and 90% more likely, respectively, to be working. With each additional year of age, individuals are 3% less likely to work and, relative to non-Hispanic Whites, all other racial and ethnic groups are less likely to work. Hispanics, Blacks, and those of another race/ethnicity are 9%, 18%, and 24% less likely to work, respectively. Relative to those living in the West, those living in the South are less likely to work (6% less likely), and those living in the Midwest are 14% more likely to work. The chances of working for those in the Northeast are not significantly different. Those living in a metro area are marginally less likely to work (4% less likely).

Living alone is positively associated with working (more than 30% more likely). Each additional child under 18 is associated with a 7% decline in the likelihood of working and, relative to those who are currently married, those who have never been

married are less likely to work (20% less) and those who are previously married are more likely (20% more). The amount earned by other household members is positively associated with the chances of working. For example, those living in a household where members earn the mean for people with disabilities are 22% more likely to work, and those living in a household where members earn the mean for people without disabilities are 23% more likely to work. Relative to members of the 1996 panel, respondents from the 2001 are 16% less likely to work and respondents from the 2004 panel are 11% less likely to work.

A large number of predictors demonstrate a different relationship with employment for people with disabilities. For ease of interpretation, Table 4.3 presents the net effects of each variable – the main effect of each predictor plus the interaction between the predictor and disability – in odds ratios by disability status. Consistent with hypothesis 1.3 outlined in chapter two, the net effect of being female is less pronounced for women with disabilities than it is for women without disabilities; under the main effects results presented in column two, we would estimate that women with disabilities are 91% less likely to work than men without disabilities, whereas, allowing for an interaction between female and disability, we estimate that women with disabilities are 84% less likely.

The cost of dropping out of high school is borne more heavily by people with disabilities than it is for people without disabilities. Under the main effects model, people with disabilities completing less than a high school education are an estimated 88% less likely to work than high school graduates without disabilities; incorporating the interaction between disability and education, people with disabilities who failed to

complete a high school education are an estimated 90% less likely to work. However, consistent with hypothesis 1.1, the benefits conferred to higher education are also greater for people with disabilities. Under the main effects model, college graduates with disabilities are 66% less likely to work relative to high school graduates without disabilities, but after considering the interaction term, the disability penalty is somewhat reduced: college graduates with disabilities are an estimated 47% less likely to work than high school graduates without disabilities. This finding supports hypothesis 1.2.

Table 4.3 Selected Net Effects of Disability Interactions from Binary Logistic Regression Models Predicting Employment

	Has disability	No disability
	OR	OR
Female	0.156	0.301
Education		
HS drop out	0.095	0.541
HS graduate	0.203	Ref.
Some college	0.307	1.467
College graduate	0.535	1.761
Age	0.196	0.970
Race/Ethnicity		
Hispanic	0.177	0.895
Black	0.133	0.881
Other	0.166	0.747
White	0.203	Ref.
Region		
Northeast	0.185	0.973
South	0.166	0.982
Midwest	0.230	1.148
West	0.203	Ref.
Number of children under age 18	0.200	0.916
Marital Status		
Never married	0.128	0.847
Divorced, widowed, or separated	0.178	1.368
Married	0.203	Ref.
Earned income from other household members	0.213	1.024
Panel Year		
1996	0.203	Ref.
2001	0.168	0.836
2004	0.156	0.931

The negative effects on employment chances of being Black, living in the South, having never married, and being in the 2004 survey panel are amplified for people with disabilities. Relative to married, non-Hispanic Whites living in the West drawn from the 1996 panel, Blacks with disabilities are 87% less likely to work (consistent with hypothesis 1.4), Southern residents with disabilities are 83% less likely to work, never-married people with disabilities are 87% less likely to work, and people with disabilities in the 2004 panel are 84% less likely to work. On the other hand, the negative impact of the number of children under 18 on employment probability is reduced for people with disabilities than for their counterparts without disabilities, and the positive effect of earned income from other household members is greater for people with disabilities.

OCCUPATIONAL SORTING AND DISABILITY WAGE INEQUALITY

In addition to assessing disability differences in the likelihood of employment, I also use a combination of OLS and multilevel models to estimate the size of the disability wage gap among full-time workers and the extent to which between- and within-occupation differences explain the gap. Estimates of the disability earnings gap from nested OLS models are presented in the top panel of Table 4.4, along with a percentage reporting how much variance remains unexplained after adding each cluster of predictors (using the estimate from the null model as a baseline).

In addition to individual-level predictors, such as demographic characteristics, human capital, household and labor market characteristics, I also consider the impact of between and within-occupation differences on earnings using multilevel models that treat occupation as a second level (shown in the bottom panel of Table 4.4).

In the baseline OLS model, the wage gap between full-time workers with disabilities and full-time workers without disabilities is -0.146, a difference of \$33 per week or \$1,724 per year at the overall mean wage. Accounting for human capital and demographic characteristics – including sex, race, age, and educational attainment – explains approximately 5% of the wage gap, reducing the gap to -0.139. Accounting for household characteristics (marital status, the number of dependent children, living alone, and the amount of earned income from other household members) explains an additional 7% of the wage gap, reducing it further to -0.128. Region and metropolitan area residence explain about 1% more. Thus, individual, household, and local labor market predictors account for a total 13% of the disability wage gap, leaving 87% of the variation in wages unexplained. Net of individual factors, full-time workers with disabilities earn about \$28.61 per week less than full-time workers without disabilities, or about \$1,488 per year.

Table 4.4 OLS and HLM Estimates of the Disability Wage Gap for Full-Time Workers

	Disability Earnings Inequality	Percent Unexplained
Individual Characteristics		
OLS (Baseline)	-0.146	100%
OLS (Human capital + Demographic characteristics)	-0.139	95.2%
OLS (Household characteristics)	-0.128	87.7%
OLS (Region + metro area)	-0.126	86.3%
Occupation		
OLS (Occupation dummies)	-0.093	63.7%
HLM (Occupation allowed to vary)	-0.089	61.0%
HLM (Occupation and disability allowed to vary)	-0.083	56.8%

Note: OLS coefficients adjusted for weighting. Unweighted OLS coefficients were also considered, but the difference in the weighted and unweighted coefficients was negligible. All coefficients are statistically significant at $p < 0.001$.

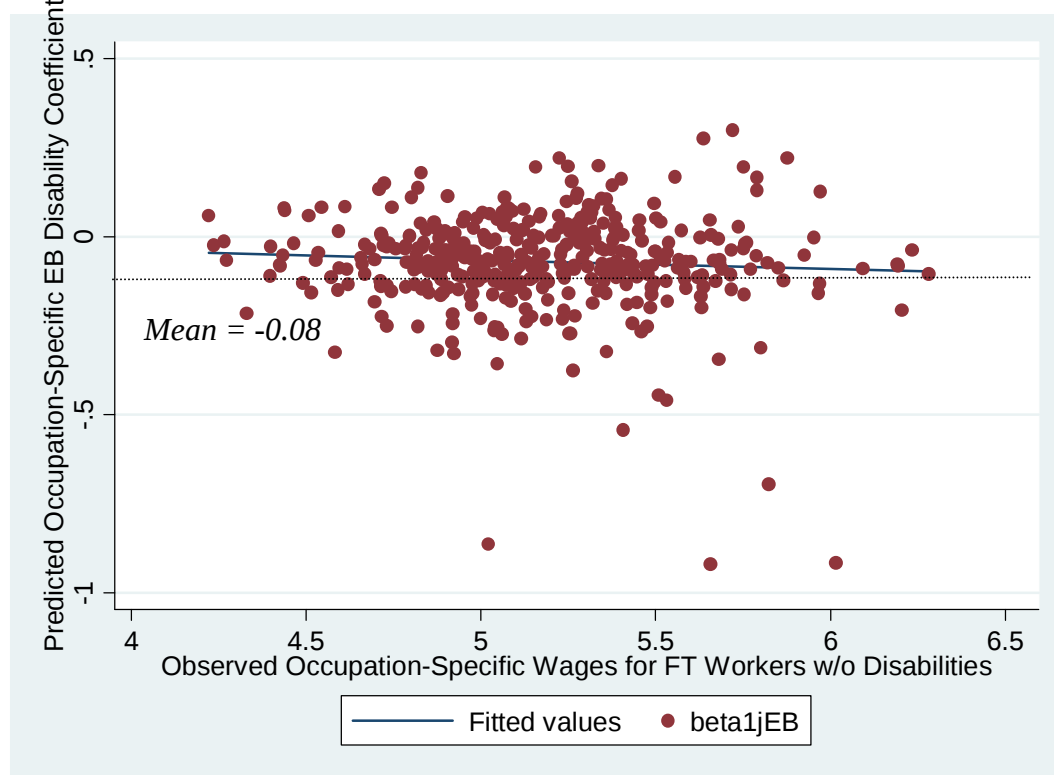
We can interpret the disability coefficient from the individual-level model as the disability wage gap that is due to between- and within-occupational differences. After controlling for the effect of occupation, either through the OLS model with occupation dummies or the random intercept model (the results from both models are comparable), the interpretation of the disability coefficient changes. We now interpret it as the expected within-occupation disability wage gap. This model controls for between-occupational differences that arise from the possibility that workers with disabilities may be more likely to work in different occupations than workers without disabilities, and that this difference contributes to observed wage inequality. However, it assumes that the disability wage gap is constant across all occupations, so that the average gap in wages between custodians with disabilities and custodians without disabilities is expected to be the same as the gap in wages between stockbrokers with and without disabilities.

Before adjusting for any other characteristics, there is strong evidence that occupational structure accounts for substantial variation in weekly earnings among full-time workers and that a multilevel model adjusting for clustering within occupations is appropriate. The intraclass correlation statistic calculated from the null model indicates that occupations account for an estimated 25% of the variance in weekly earnings. After controlling for between-occupational differences, the OLS estimate of the disability wage gap is reduced to -0.093, which translates into \$21 per week or \$1,098 per year. Controlling for between-occupation differences explains an additional 23 percent of the disability wage gap – more than amount explained by all of the individual-level predictors taken together. The first multilevel model result is similar, yielding a disability wage gap estimate of -0.089 or \$20 per week.

The random coefficient model (the second multilevel model) allows the effect of disability on wages to vary across occupations, so that we no longer make the assumption that the disability wage gap is constant across all occupations. Therefore, we can say the second HLM model separately adjusts for differential sorting into occupations (via the random intercept) and differential pay to workers in the same occupations (via the random coefficient). Allowing the relationship between disability and earnings to vary across occupations as well further explains an additional 4% of the variance, reducing the disability wage gap to -0.083, or \$19 per week and \$980 per year. This result provides evidence in support of hypothesis 1.5 that the majority of differences by occupation are due to differences in the types of occupations that employ full-time workers with disabilities rather than inequality in wages paid to workers working in the same occupations. After adjusting for the effects of differential occupational sorting and occupational rewards, 57% of the disability wage gap remains unexplained.

Based on the results of the second multilevel model, I generated empirical bayes estimates of the occupation-specific disability wage gap and regressed these estimates on the average occupation-specific earnings of full-time workers without disabilities. The regression line and scatterplot of the results is displayed in Figure 1. Although there is a slight negative slant to the regression line, these regression results fail to provide evidence that size or direction of the disability wage gap varies across the occupational structure.

Figure 4.1 Regression of Within-Occupation Disability Earnings Inequality on Mean Occupation-Specific Logged Earnings for Full-Time Workers without Disabilities



SUMMARY

The analyses described in this chapter tested a number of the hypotheses that were laid out in chapter two (summarized in Table 4.5). All of the hypotheses tested in this chapter received unambiguous support from the above analyses. Hypotheses 1.1 and 1.2 taken together posited that, while college educated people with disabilities realize a larger advantage over people with disabilities with less education than college educated people without disabilities experience over their counterparts with less education, this larger benefit is not enough to neutralize the disadvantage in employment associated with being a person with disabilities. Hypothesis 1.3 stated that women with disabilities would experience a smaller disadvantage in employment chances relative their male

counterparts with disabilities than women without disabilities face relative to their male peers without disabilities. Hypothesis 1.4 put forward the argument that nonwhites with disabilities would experience a larger race penalty relative to their white counterparts than nonwhites without disabilities experience relative to their white counterparts. Last, hypothesis 1.5 posits that the primary way through which occupations can explain the disability gap in full-time wages is through the systematic sorting of workers with disabilities into different occupations than their peers without disabilities (between-occupation differentials).

Table 4.5 Summary of Hypotheses Tested

Hypothesis	Supported
1.1 College-educated people with disabilities experience a greater comparative advantage over people with disabilities with less than a college education than college-educated people without disabilities enjoy over people without disabilities without a college education.	Yes
1.2 Despite the larger comparative advantage enjoyed by college-educated people with disabilities, they still experience significant disadvantage in employment rates relative to college-educated people without disabilities.	Yes
1.3 Women with disabilities experience a smaller disadvantage in the likelihood of being employed compared to men with disabilities than do women without disabilities compared to men without disabilities.	Yes
1.4 Net of other factors, nonwhites with disabilities experience a larger disadvantage in the likelihood of being employed relative to whites with disabilities than do their counterparts without disabilities relative to whites without disabilities.	Yes
1.5 Occupations contribute to disability earnings inequality chiefly through <i>between-occupation</i> differences, wherein workers with disabilities tend to be selected into lower-paying occupations and out of higher-paid ones.	Yes

CHAPTER 5: THE IMPACTS OF SOCIAL CHANGE ON EMPLOYMENT

The analyses presented in this chapter address the question of how the rapid social changes of the past forty years have affected long-term trends in disability employment inequality. I first present descriptive trends in employment and education for the period from 1969-2006, followed by the results of a series of logistic regression models estimating the log odds of employment for the 16 five-year birth cohorts born between 1905 and 1980. Last, I illustrate the trends in the predicted probability of employment across birth cohorts for selected characteristics.

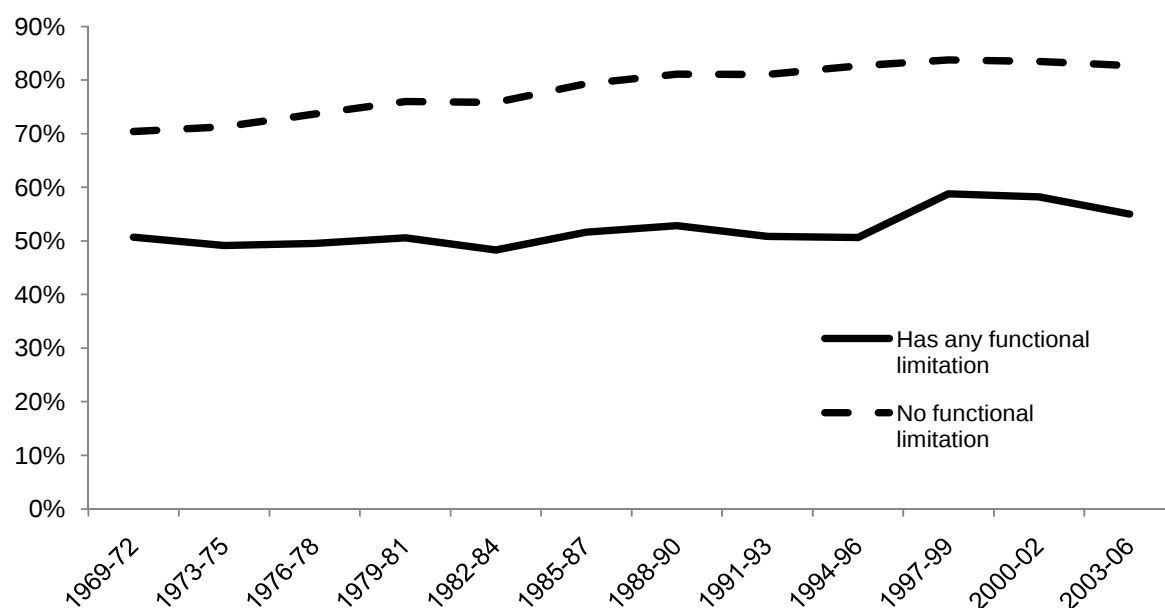
DESCRIPTIVE FINDINGS

Although employment trends over the past forty years do not reveal any dramatic declines in the employment rate for people with disabilities, mapping the yearly unadjusted trends for this group indicates that they have not experienced the same employment expansions as working-age people without disabilities have over time. However, when we break employment trends down by birth cohort instead, we can observe growth in the unadjusted employment rates for people with disabilities across birth cohorts that tracks the growth in employment rates for cohorts of people without disabilities.

The overall trend in employment rates for working-age people without disabilities over the 1969-2006 period is one of gradual increase (refer to Figure 5.1). During the

1969-72 period, the employment rate was 70.4%. By 1991-93, the employment rate increased by 10 percentage points to 80.1%, and by the 2003-06 period, it increased to 82.7%. The overall trend in employment rates for working-age people without disabilities over the 1969-2006 period is not as consistent as it is for people without disabilities. The employment rate hovered around or under 50% until the end of the 1990s, at which point it increased to 58.8%, declining to 55% during the 2003-06 period.

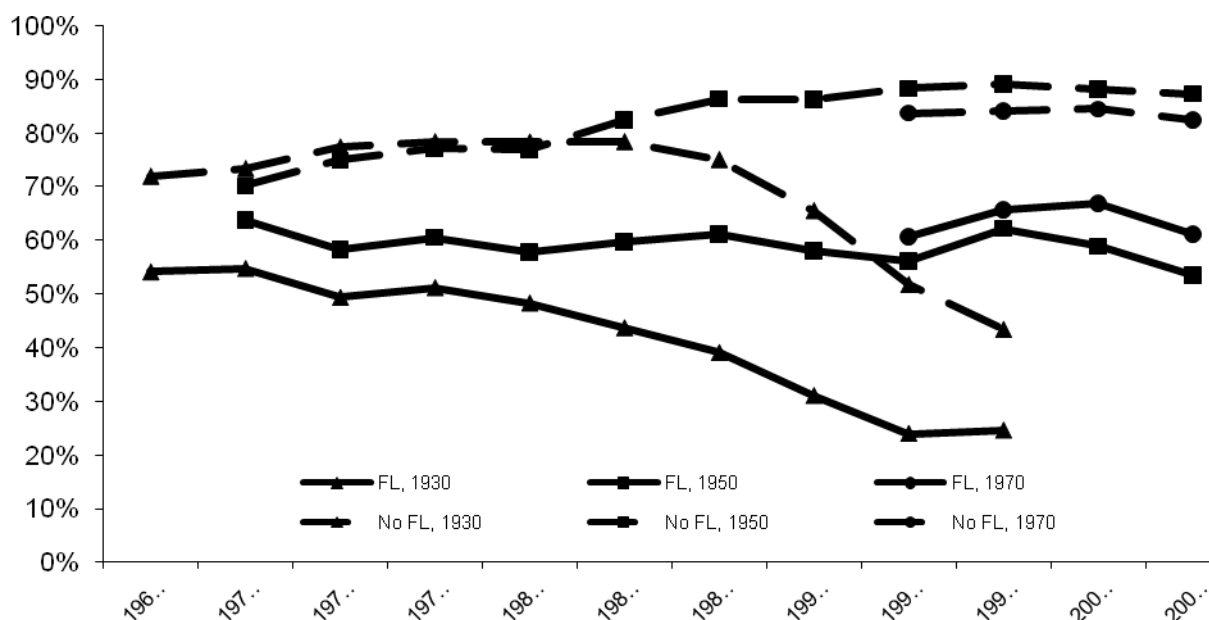
Figure 5.1 Percent of U.S. Men and Women Employed by Disability Status, 1969-2006



Note: Percentages are population weighted and age-adjusted using the 2000 Census.

As an illustration of cohort differences in employment rates, Figure 5.2 shows the employment rates for the birth cohorts born 1930-34, 1950-54, and 1970-74 over the 1969-2006 time period. The share employed across each successive birth cohort consistently increased for both people with and without disabilities. The trends also suggest that the gap between people with and without disabilities may have narrowed among younger birth cohorts.

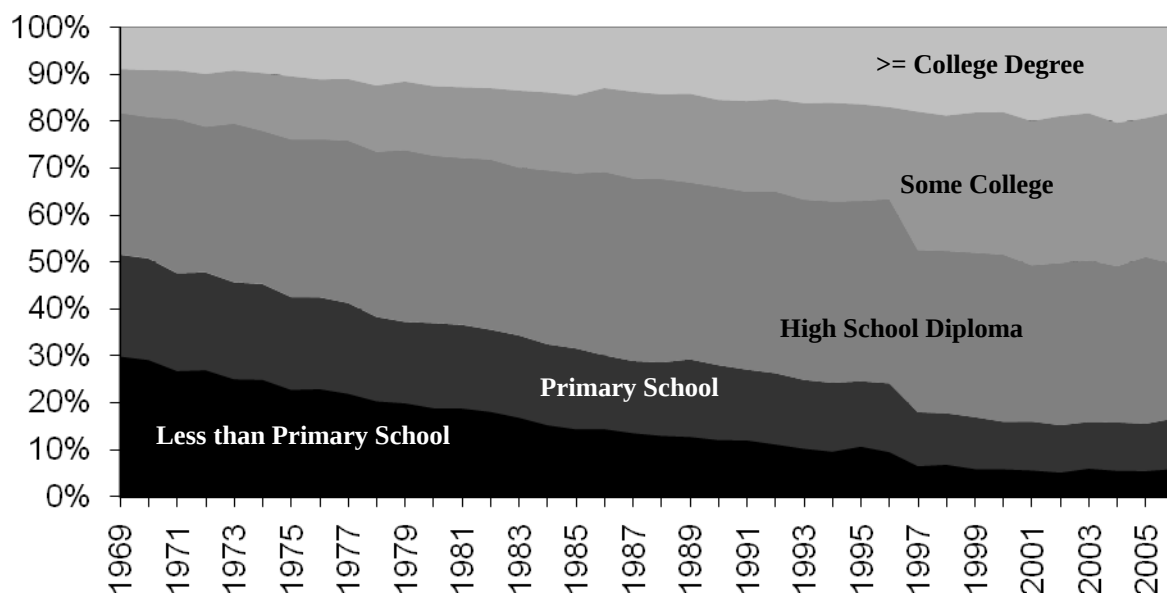
Figure 5.2 Percent of U.S. Men and Women Employed by Disability Status for Selected Birth Cohorts, 1969-2006



Note: Percentages are population weighted and age-adjusted using the 2000 Census.

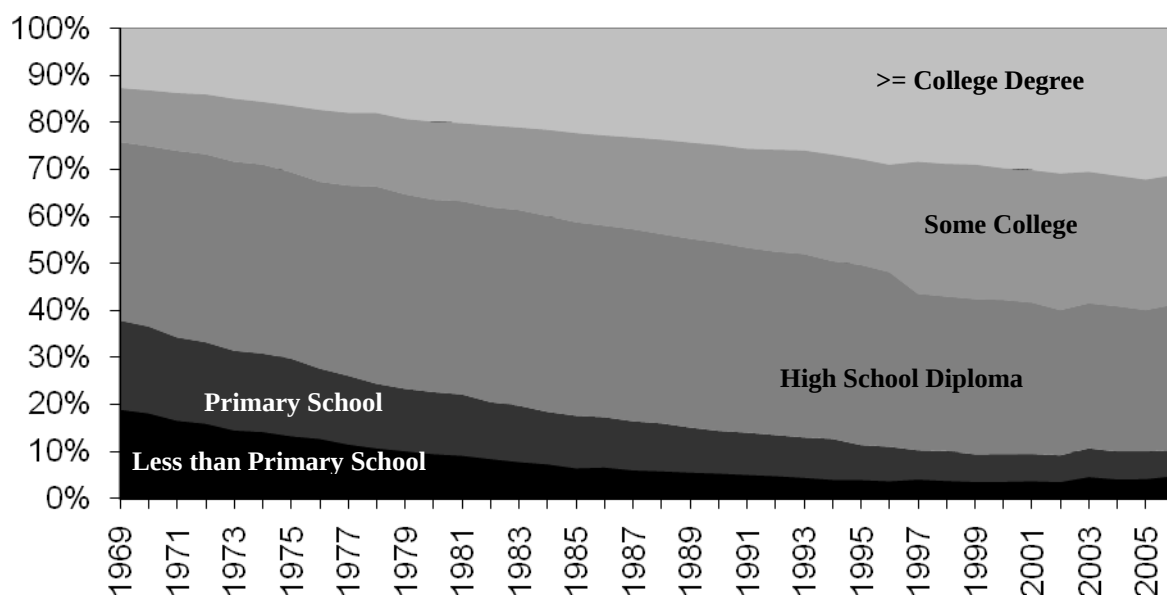
Over the same time period, the growth in the share attending and graduating from college also grew remarkably (Figures 5.3a and 5.3b). Although the growth in attainment of at least a four-year degree for people with disabilities grew less than it did for people with disabilities (a net increase of 9 versus 19 percentage points), the total share attending at least some college grew by roughly the same amount for both groups (32 and 35 percentage points, respectively). By 2006, 50% of people with disabilities age 25-64 had attained at least some college education (compared to 59% of people without disabilities), and 18% had completed at least a four-year college degree (compared to 31% of people without disabilities).

Figure 5.3a Distribution of Educational Attainment for People with Disabilities Age 25-64, 1969-2006



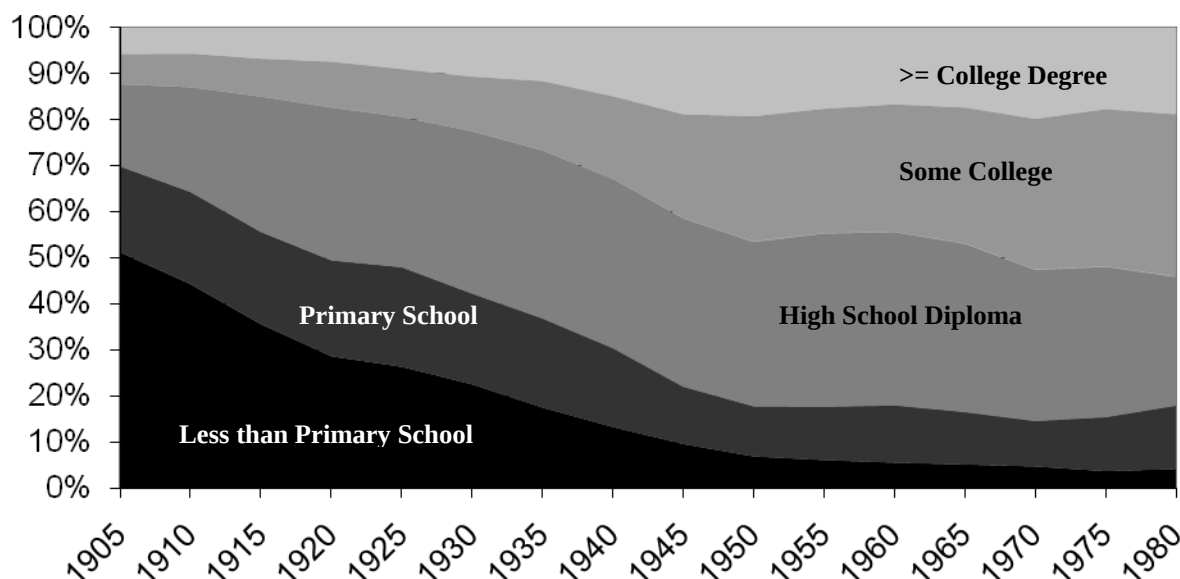
Note: Percentages are population weighted and age-adjusted using the 2000 Census.

Figure 5.3b Distribution of Educational Attainment for People without Disabilities Age 25-64, 1969-2006



Note: Percentages are population weighted and age-adjusted using the 2000 Census.

Figure 5.4a Distribution of Educational Attainment for People with Disabilities Age 25-64, Born Between 1905 and 1981

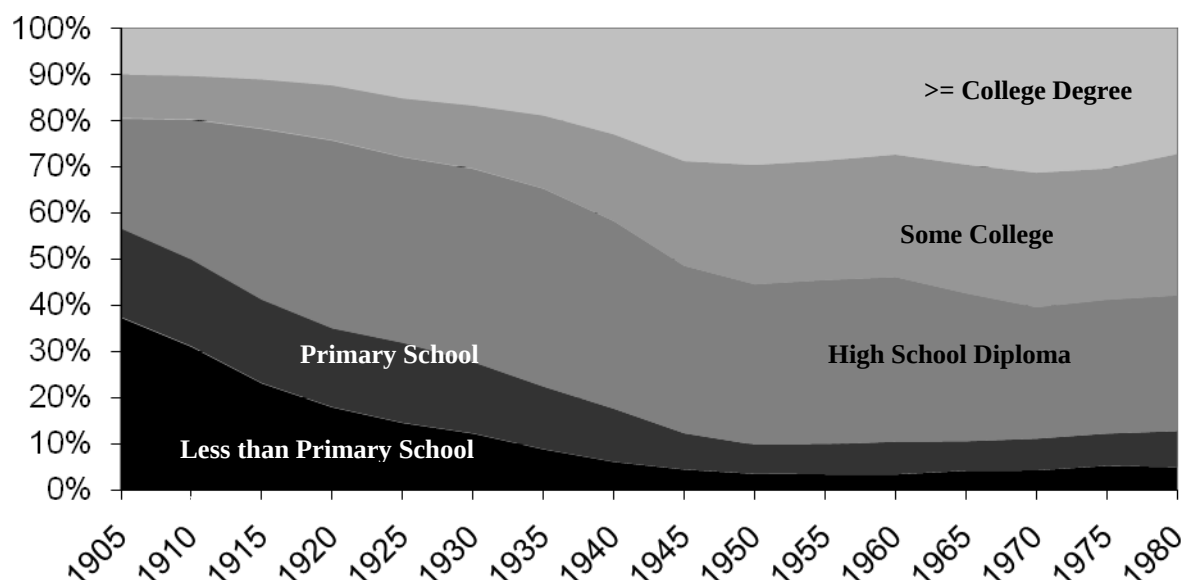


Note: Percentages are population weighted and age-adjusted using the 2000 Census.

When we compare cohort-specific rates of postsecondary educational attainment, the growth in postsecondary education is even more dramatic (Figures 5.4a and 5.4b).

Among those born 1930-34, 22% of people with disabilities had attended at least some college (compared to 30% of people without disabilities). By contrast, 47% and 55% (respectively) of those born 1950-54 had attained at least some college and 52% and 60% (respectively) of those born 1970-74 had done so. The differences in employment rates and educational attainment by birth cohort suggest that the social and political changes over the past forty years may have engendered substantially different employment experiences across birth cohorts.

Figure 5.4b Distribution of Educational Attainment for People without Disabilities Age 25-64, Born Between 1905 and 1981



Note: Percentages are population weighted and age-adjusted using the 2000 Census.

Table 5.1 summarizes the distribution of population characteristics over the entire 1969-2006 period by disability status for the variables that will be included in the logistic regression models. The average employment rate over the entire period for people with disabilities is 49% versus 79% for people without disabilities. The share of people with disabilities attaining at least some college education is smaller relative to the share of people without disabilities attaining at least some college education: 34.6 versus 45.2%, respectively. People with disabilities are older by an average of 6 years than people without disabilities. People with disabilities are also somewhat more likely to be female – 53.6 versus 51.1% - and Black – 13.6% versus 11.0%. The distribution of people over birth cohorts by disability status shows that people with disabilities are significantly overrepresented among earlier birth cohorts and underrepresented among later birth cohorts. Due to the well-known relationship between age and disability, this is unsurprising. However, the magnitude of the difference in distribution is not large. The

bulk of both people with disabilities and people without disabilities over the entire pooled sample were born between 1930 and 1954.

Table 5.1 Distribution of Population Characteristics by Disability Status

	Disability	No Disability
	Mean (SE)	Mean (SE)
Employed	0.490 (0.002)	0.791 (0.001)
Has more than a HS education	0.346 (0.002)	0.452 (0.002)
Age	47.447 (0.022)	41.386 (0.022)
Female	0.536 (0.001)	0.511 (0.000)
Black	0.136 (0.002)	0.110 (0.001)
Birth Cohort		
1905-09	0.010 (0.000)	0.005 (0.000)
1910-14	0.029 (0.000)	0.015 (0.000)
1915-19	0.048 (0.001)	0.026 (0.000)
1920-24	0.069 (0.001)	0.042 (0.000)
1925-29	0.077 (0.001)	0.056 (0.000)
1930-34	0.080 (0.001)	0.065 (0.000)
1935-39	0.089 (0.001)	0.079 (0.000)
1940-44	0.116 (0.001)	0.107 (0.000)
1945-49	0.124 (0.001)	0.126 (0.000)
1950-54	0.110 (0.001)	0.127 (0.000)
1955-59	0.094 (0.001)	0.121 (0.001)
1960-64	0.070 (0.001)	0.099 (0.000)
1965-69	0.044 (0.001)	0.066 (0.000)
1970-74	0.027 (0.000)	0.042 (0.000)
1975-79	0.012 (0.000)	0.021 (0.000)
1980-81	0.002 (0.000)	0.003 (0.000)
N	304,937	1,548,768

Note: All differences in means by disability status are statistically significant at $p < 0.05$.

MULTIVARIATE FINDINGS

In order to assess whether birth cohort helps to explain the relationship between disability and employment I fit four nested models (Table 5.2). Model 1, the simplest model, estimates a model predicting the log odds of employment using individual-level predictors only. Model 2 adds interaction terms between all of the individual-level predictors and disability. These interaction terms allow the relationship between

individual-level predictors and employment to differ by disability status. Model 3 adds a series of dummies for birth cohort, with the earliest birth cohort (1905-09) acting as the reference category. The cohort dummy variables capture the extent to which the unique circumstances faced by individuals born at a particular point in time contribute to the likelihood of employment. Finally, Model 4 adds interaction terms between disability and birth cohort, allowing us to model the additional variation due to the distinctive social environments faced by each birth cohort of people with disabilities in particular.

In Model 1, all of the individual-level covariates demonstrate a large and statistically significant relationship with employment. In particular, people with disabilities, on average, face a 74% lower likelihood of employment, net of other characteristics included in the model. Women also experience a substantially reduced probability of employment relative to men; all else equal, women are 76% less likely to work relative to men. Blacks face a somewhat reduced probability of employment (a 9% smaller chance than Whites). Each additional year of age is associated with a greater probability of employment, though at a decreasing rate. Those with more than a high school education enjoy a considerably greater likelihood of employment, being, on average, 84% more likely to be employed than those with a high school education or less. The binary post-1996 indicator, capturing both secular trends that differ before and after 1996 and the difference in the NHIS sampling frame resulting from the 1997 NHIS survey redesign, demonstrates a 28% greater probability of employment in the 1997-2006 period relative to the 1969-1996 period.

Table 5.2 Results of Binary Logistic Regression Models Predicting Employment^a

	Model 1	Model 2	Model 3	Model 4
Predictors	b (s.e.)	b (s.e.)	b (s.e.)	b (s.e.)
Intercept	7.386 (0.039)	7.902 (0.046)	8.192 (0.059)	8.123 (0.063)
Disability	-1.349 (0.007)	-3.891 (0.088)	-4.024 (0.088)	-5.683 (0.179)
Age	0.223 (0.002)	0.238 (0.002)	0.280 (0.002)	0.289 (0.002)
(Centered)				
Age squared	-0.003 (0.000)	-0.003 (0.000)	-0.003 (0.000)	-0.003 (0.000)
Female	-1.407 (0.006)	-1.696 (0.007)	-1.700 (0.007)	-1.703 (0.007)
Black	-0.091 (0.009)	0.082 (0.010)	0.067 (0.010)	0.062 (0.010)
More than				
HS education	0.610 (0.006)	0.525 (0.006)	0.482 (0.006)	0.469 (0.006)
Post-1996	0.250 (0.009)	0.263 (0.009)	-0.134 (0.015)	-0.252 (0.015)
Disability x				
Age	---	-0.099 (0.004)	-0.103 (0.004)	-0.147 (0.004)
(Centered)				
Disability x				
Age squared	---	0.001 (0.000)	0.001 (0.000)	0.001 (0.000)
Disability x	---	1.066 (0.011)	1.066 (0.011)	1.074 (0.011)
Female				
Disability x	---	-0.671 (0.016)	-0.667 (0.016)	-0.648 (0.016)
Black				
Disability x				
More than	---	0.351 (0.012)	0.371 (0.012)	0.415 (0.012)
HS education				
Disability x	---	-0.134 (0.014)	-0.113 (0.014)	0.474 (0.022)
Post-1996				
Cohort				
1905	---	---	Ref.	Ref.
1910	---	---	0.041 [†] (0.024)	0.045 [†] (0.027)
1915	---	---	-0.049 (0.025)	-0.025 [†] (0.028)
1920	---	---	-0.129 (0.023)	-0.095 (0.027)
1925	---	---	-0.139 (0.025)	-0.092 (0.028)
1930	---	---	-0.086 (0.025)	-0.021 [†] (0.029)
1935	---	---	0.020 [†] (0.027)	0.120 (0.030)
1940	---	---	0.175 (0.028)	0.313 (0.030)
1945	---	---	0.373 (0.029)	0.556 (0.032)
1950	---	---	0.515 (0.031)	0.749 (0.033)
1955	---	---	0.594 (0.033)	0.854 (0.035)
1960	---	---	0.681 (0.035)	0.966 (0.038)
1965	---	---	0.766 (0.037)	1.071 (0.040)
1970	---	---	0.934 (0.040)	1.273 (0.043)
1975	---	---	1.053 (0.044)	1.419 (0.047)
1980	---	---	1.187 (0.068)	1.593 (0.073)

Table 5.2 Results of Binary Logistic Regression Models Predicting Employment (Continued)

	Model 1	Model 2	Model 3	Model 4
Predictors	b (s.e.)	b (s.e.)	b (s.e.)	b (s.e.)
Cohort by Disability				
1905	---	---	---	Ref.
1910	---	---	---	-0.040 [†] (0.049)
1915	---	---	---	-0.127 (0.046)
1920	---	---	---	-0.175 (0.046)
1925	---	---	---	-0.223 (0.047)
1930	---	---	---	-0.297 (0.048)
1935	---	---	---	-0.470 (0.050)
1940	---	---	---	-0.647 (0.050)
1945	---	---	---	-0.871 (0.051)
1950	---	---	---	-1.134 (0.053)
1955	---	---	---	-1.307 (0.056)
1960	---	---	---	-1.473 (0.059)
1965	---	---	---	-1.582 (0.064)
1970	---	---	---	-1.724 (0.071)
1975	---	---	---	-1.864 (0.082)
1980	---	---	---	-2.098 (0.150)
Deviance	1821916	1802214.4	1793441.6	1790859
Number of parameters	8	14	29	44
BIC	1822031	1802416	1793860	1791494
N	1,853,705	1,853,705	1,853,705	1,853,705

^aAll coefficients are statistically significant at $p < 0.05$ except where otherwise noted by †.

The results of Models 2 through 4 show that the “naive” model including only level-one main effects is insufficient for capturing the variation in employment. The interaction terms between disability and individual-level predictors in Model 2 demonstrate that the individual-level predictors hold a different relationship with employment for people with disabilities than they do for people without disabilities. The improvement to employment chances with each year of age is smaller for people with disabilities than for people without. After adding the disability by Black interaction term, the “race penalty” in terms of lower employment probabilities for people without disabilities disappears (they actually face an employment advantage relative to Whites

without disabilities), but a large and statistically significant race penalty appears for Blacks with disabilities. The post-1996 employment advantage is also muted for people with disabilities relative to people without disabilities. However, people with disabilities experience a substantially reduced penalty associated with being female relative to their counterparts without disabilities, and they also experience a greater benefit from postsecondary educational attainment. Still, neither of these relative advantages is great enough to overcome the large employment disadvantage associated with disability.

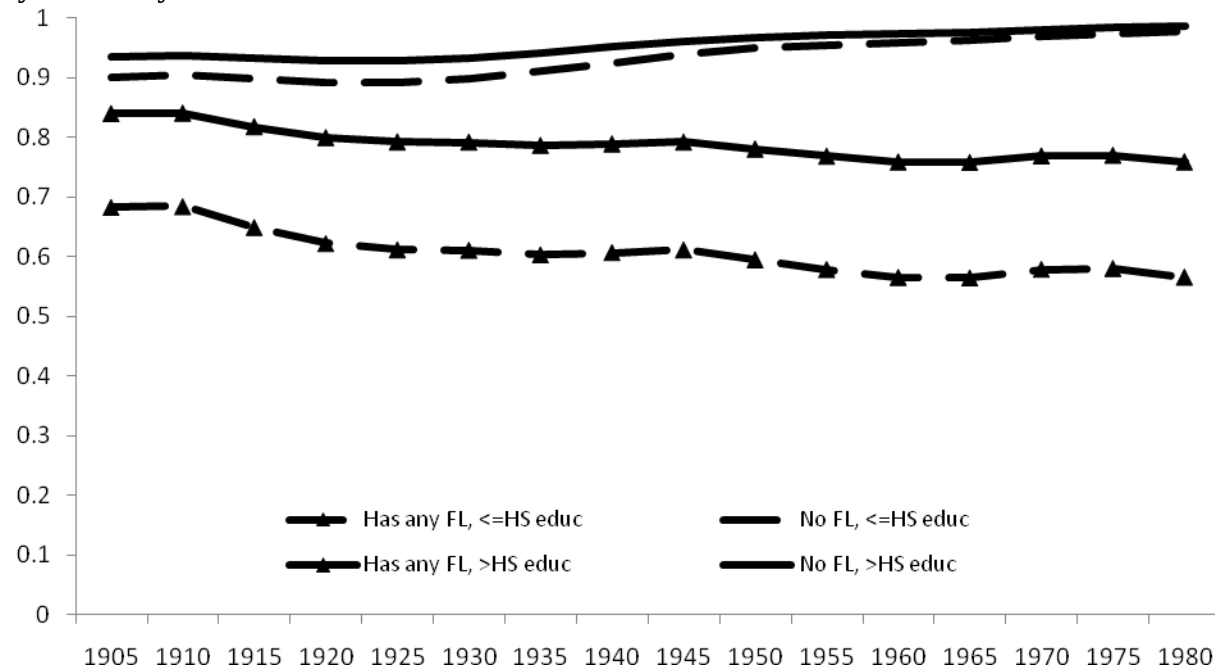
Although the estimates from Models 3 and 4 indicate that, in general, people born in 1940 and after experience an increasing advantage in employment relative to those born in 1905 (the reference birth cohort), Model 4 demonstrates that the opposite is true for people with disabilities. The birth cohort dummies added in Model 3 indicate that, after controlling for other predictors in the model, members of the most recent birth cohorts experience the greatest advantage in employment probabilities relative to the 1905 birth cohort. The birth cohorts born between 1910 and 1934 actually experience significantly lower employment rates relative to the 1905 birth cohort. This trend is likely related to the long-lasting impacts of growing up during the Great Depression on employment over the life course (see Elder 1974). However, beginning with the birth cohort born in 1940-44, the relative advantage in employment rates for each successive birth cohort grows in magnitude relative to the 1905 birth cohort.

The interaction terms between birth cohort and disability added in Model 4, with the exception of the 1910 coefficient, are statistically significant and negative. Moreover, the magnitude of the negative interaction terms is enough to negate and, for the most recent birth cohorts, to *reverse* the improvements observed for more recent birth cohorts

without disabilities. These findings suggest that, despite the multitude of social changes that have favorably impacted the education and social integration of people with disabilities, the negative relationship between disability and employment is amplified for each successive birth cohort.

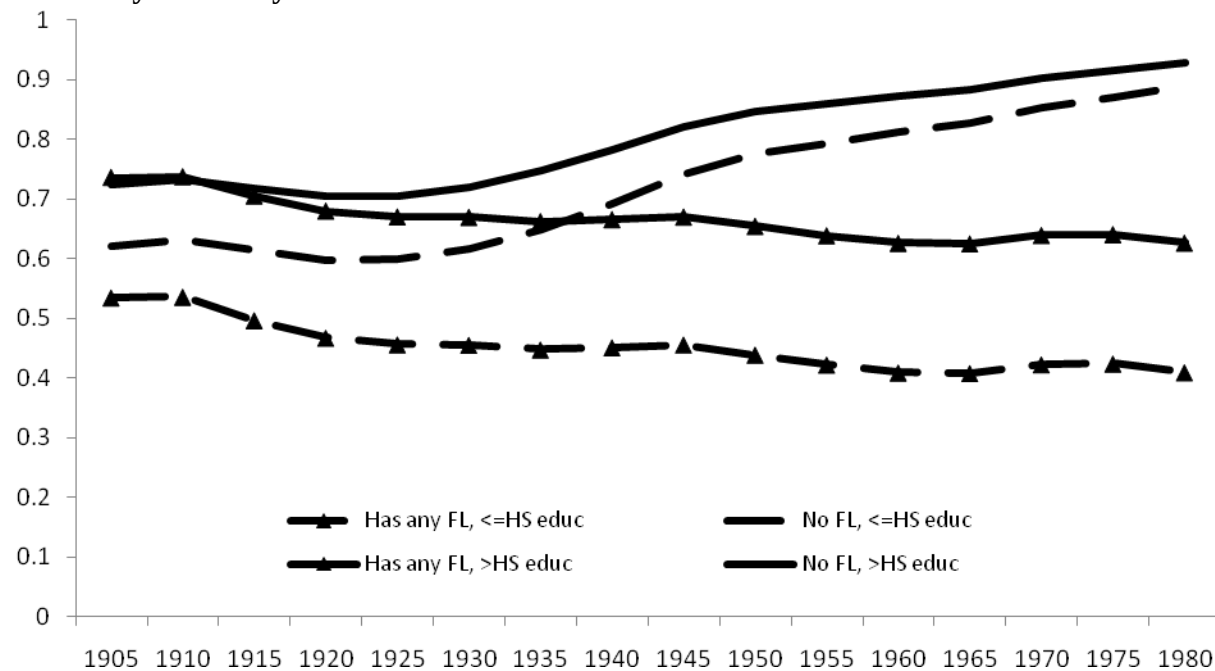
The model findings presented above support the hypothesis that, due to such phenomena as de-institutionalization and disability assistance expansions (SSI and DI in particular), the employment rates of cohorts born after the mid-20th century would experience the lowest employment rates. To illustrate, Figures 5.5a through 5.5b present the simulated probabilities of employment for each birth cohort for selected groups of characteristics. Of working-age people with disabilities, White men who have attained more than a high school education experience the highest probability of employment for any given birth cohort. For the 1905-09 birth cohort, this group of men with disabilities have a predicted probability of employment of 83.9%, which is very close to the predicted probability of employment for White men with more than a high school education without disabilities (86.7%). However, by the 1940 birth cohort, when Model 3 begins to estimate a significant improvement in employment chances overall, the predicted probability of employment for White men with disabilities with more than a high school education drops to 78.9% (compared to an improvement to 95.2% for the same group of men without disabilities). This gap in predicted employment is projected to continue into more recent cohorts. For those born in the 1970 cohort, for example, White men with at least some postsecondary education and disabilities have a predicted probability of employment of 76.9% compared to 98.1% for their peers without disabilities.

Figure 5.5a Simulated Employment Probabilities over Birth Cohort for White Men by Disability Status and Education



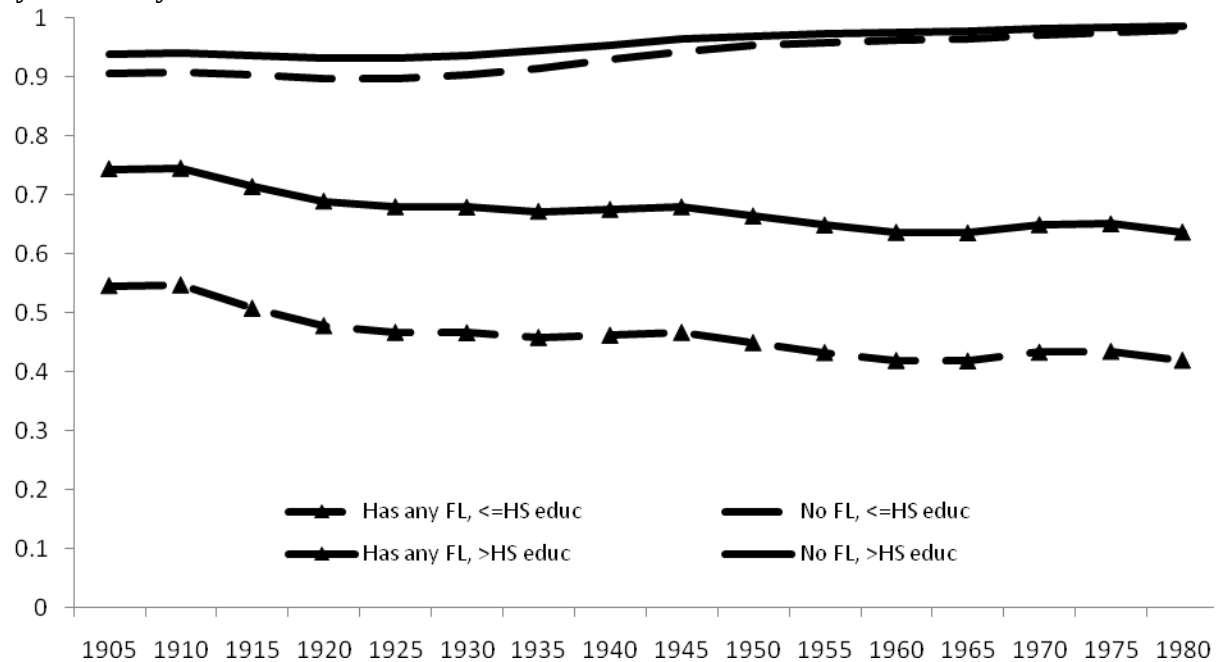
Note: Predicted probabilities assume respondents are 43 years old and that the time period is before 1997.

Figure 5.5b Simulated Employment Probabilities over Birth Cohort for White Women by Disability Status and Education



Note: Predicted probabilities assume respondents are 43 years old and that the time period is before 1997.

Figure 5.5c Simulated Employment Probabilities over Birth Cohort for Black Men by Disability Status and Education

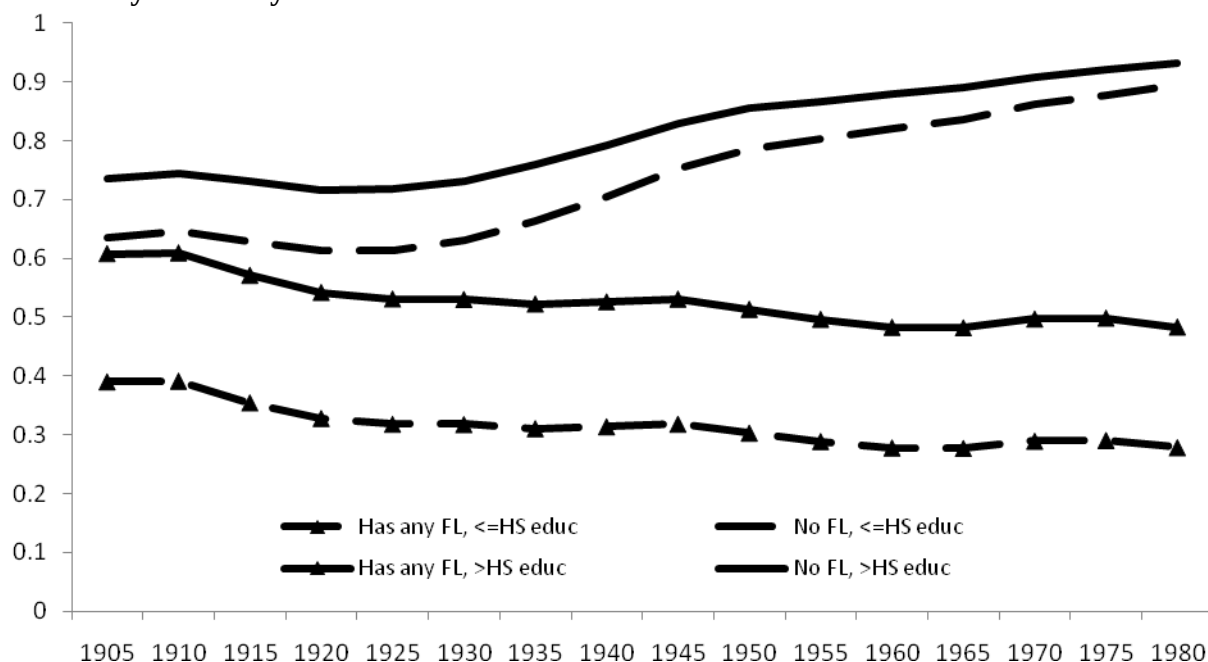


Note: Predicted probabilities assume respondents are 43 years old and that the time period is before 1997.

The simulated probabilities in Figures 5.5a through 5.5d demonstrate improvement in the likelihood of employment for all groups of working-age people without disabilities across successive birth cohorts, so that the most recent cohorts of people without disabilities experience the highest likelihood of employment, all else equal. For example, we could expect White men without disabilities born in 1905 and with no postsecondary education to face an 87% chance of working; by the 1970 birth cohort, we would expect men with the same characteristics to face a 97% chance of working. By contrast, the same figures show declines in the likelihood of employment for all groups of working-age people with disabilities, so that the most recent birth cohorts of people with disabilities experience the lowest likelihood of employment. White men with disabilities with no postsecondary education born in 1935 have an expected probability of working of 68% compared to an expected probability of employment of 58% for those

born in 1970. The declining trends hold even for those with more than a high school education.

Figure 5.5d Simulated Employment Probabilities over Birth Cohort for Black Women by Disability Status and Education



Note: Predicted probabilities assume respondents are 43 years old and that the time period is before 1997.

These divergent trends lead to a widening gap in employment probabilities by disability status, growing most quickly for women. It should be noted that these probabilities are simulated; we do not actually observe, for example, the 1980 birth cohort at age 43 (the set value for age in the predicted probabilities). However, we directly observe part or all of the birth cohorts born between 1925 and 1964 at age 43 and these are the cohorts for whom the divergence in employment probabilities by disability status is the steepest. Thus, it is reasonable to believe that the projected employment probabilities for the four most recent birth cohorts are fairly accurate and that the most recent birth cohorts of people with disabilities will continue to face the same or even

bigger gaps in employment probabilities as they age when compared to their peers without disabilities.

SUMMARY

This chapter tested two contrasting hypotheses: hypothesis 2.1, positing that cohorts of people with disabilities born closer to the end of the 20th century would see higher rates of employment than cohorts of people with disabilities born earlier in the 20th century; and hypothesis 2.2, positing that cohorts of people with disabilities born closer to the end of the 20th century would see lower rates of employment than cohorts of people with disabilities born earlier in the 20th century. The results of the analyses discussed above support the latter hypothesis that, despite being better positioned to enjoy mainstream education and civil rights protections, people with disabilities born later in the 20th century actually experience lower likelihoods of employment than people with disabilities born earlier in the 20th century.

Table 5.3 Summary of Hypotheses Tested

Hypothesis	Supported
2.1 Controlling for age, more recent birth cohorts of people with disabilities (specifically, those born in 1970 or afterwards) should have significantly higher employment rates than birth cohorts of people with disabilities born earlier in the 20 th century.	No
2.2 Relative to earlier cohorts of people with disabilities, middle-term and later birth cohorts of people with disabilities experience lower employment rates at the same ages.	Yes

CHAPTER 6: ECONOMIC SURVIVAL

This chapter examines whether and how jobless people with disabilities accomplish economic survival by examining their personal and household income streams and their experiences with material hardship. I first compare the total personal and household income of jobless people with disabilities to both jobless people without disabilities and employed people with disabilities. I then compare these same groups on their experiences with four other dimensions of material hardship: food hardship, bill-paying hardship, medical hardship, and housing hardship. I also present a snapshot of the personal characteristics of members of these three groups, including their living arrangements, primary reason for not working (for jobless individuals), educational attainment, and demographic characteristics. To provide an in-depth picture of how the economic circumstances differ between jobless people with and without disabilities, I compare these two groups on their overall receipt, type, and amount of unearned income and then disaggregate the receipt, type, and amount of unearned income by selected personal characteristics.

OVERALL INCOME ADEQUACY AND MATERIAL HARDSHIP

Taken together, the analyses presented below of household and personal income, and of material hardships, suggest that many jobless adults with disabilities struggle to achieve economic survival. Although, relative to jobless adults without disabilities, jobless adults

with disabilities receive a much larger amount in total personal income per month, they live in households that experience a much lower level of economic resources, on average, than do jobless adults without disabilities. This means that the income of jobless adults with disabilities is a substantially more important contribution to the overall household economy than that of jobless adults without disabilities, and that members of their households are less able to provide them with additional financial support. Furthermore, the state of low overall income for the households of people with disabilities is not limited to only those without jobs. Although they realize a much greater level of personal income, employed adults with disabilities also live in households that, on average, are much poorer than households of jobless adults without disabilities.

The analyses presented below also demonstrate that a significant percentage of jobless and employed people with disabilities experience material distress on non-monetary dimensions of hardship. Despite their participation in paid work, employed people with disabilities are more likely to experience material hardship on every dimension than are jobless people without disabilities. Although they are somewhat less likely to experience food hardship or bill-paying hardship relative to jobless people with disabilities, employed people with disabilities are nearly or equally as likely to experience medical and housing hardships. These findings suggest that employment is not an unmitigated ticket out of poverty and material hardship for people with disabilities.

Overall Income Adequacy

Overall, the share of jobless adults with disabilities receiving unearned income from any source is the largest (78%), followed by employed adults with disabilities (61%), and jobless adults without disabilities (60%). Jobless adults with disabilities also

realize more in personal income than do jobless adults without disabilities (Table 6.1). Per month, jobless adults with disabilities see an average of \$987, compared to \$568 for jobless adults without disabilities. The total average income for employed adults with disabilities far surpasses the average income for either of the other two groups, at \$3,041 per month.

An interesting picture emerges when we consider the average household economic context for each of the three groups, however. Although jobless adults without disabilities realize the smallest amount of personal income, they reside in households with a substantially larger amount of earned and unearned income from other household members, regardless of whether it is measured as an overall total or a per capita amount. Whereas the other members of the households of jobless adults without disabilities receive and earn an average of \$4,586 per month (or \$2,300 per person), those co-residing with jobless adults with disabilities receive and earn more than \$1,500 less per month, or \$600 less per person per month. The household income picture for employed adults with disabilities is very similar to that of jobless adults with disabilities; other household members of these households only see approximately \$200 more per month – or \$100 per person – than members of households of jobless adults with disabilities.

We can also observe marked differences among the three groups if we consider the contributions of total personal income to the overall household budget. The total personal income of both jobless and employed adults with disabilities make up a large share of the overall household income, slightly less than half of the entire household income in the case of jobless adults with disabilities and 60% of the household income in

Table 6.1 Total Personal and Household Monthly Income by Disability and Employment Status for Adults 25-64: 1996, 2001, and 2004 Survey of Income and Program Participation Panels

	Has Disability, Jobless	No Disability, Jobless	Has Disability, Employed
% receiving unearned income from any source	78.6%	60.1%	60.9%
Total personal unearned and earned monthly income, Mean	\$987.34	\$567.99	\$3,040.86
Total unearned and earned monthly income from other household members, Mean	\$2,835.81	\$4,585.62	\$3,084.45
Total unearned and earned monthly income from other household members per other person, Mean	\$1,698.70	\$2,299.10	\$1,793.48
Personal monthly income as % of total household monthly income	46.8%	23.4%	61.2%
Unweighted N	9,783	15,111	9,905

Note: All figures are population weighted.

the case of employed adults with disabilities. By contrast, the total personal income of jobless adults without disabilities comprises a far smaller share of the overall household budget at a little less than a quarter of the total household income. If we exclude those living alone from these statistics, each share of the household budget drops, but is still substantial: For those who do not live alone, the income of jobless adults with disabilities makes up 34% of the total household budget, the income of jobless adults without disabilities makes up 17% of the total household budget, and the income of employed adults with disabilities makes up 54% of the total household budget (figures not shown in the table). These figures suggest that the unearned income brought into the household by jobless adults with disabilities plays a very important role in the functioning of the household.

Material Hardship

How do jobless adults (those with and without disabilities) and employed people with disabilities fare on non-monetary measures of economic well-being? Despite their larger amounts of monthly personal income, jobless adults with disabilities experience substantially greater material hardships than their counterparts without disabilities. The differences between jobless adults with disabilities and jobless adults without disabilities in the share experiencing material hardship on every measure are statistically significant at the $p < 0.001$ level (Table 6.2). Thirty percent of jobless adults with disabilities report problems getting enough food, 26% report problems with getting food to last the whole month, and 23% report problems affording balanced meals. The percentage of jobless adults without disabilities experiencing any of these three hardships is half the share of jobless adults with disabilities: 17% of jobless adults without disabilities reported problems getting enough food, 13%

reported problems with getting food to last for the entire month, and 11% reported problems affording balanced meals.

The share of all groups experiencing other types of hardships is less than the share experiencing food hardships, but still represent at least 10-15% of jobless adults with disabilities and 5-10% of jobless adults without disabilities. Eleven percent of jobless adults with disabilities did not pay their rent or mortgage in the interview month, 19% did not pay at least one utility bill, and 8% had their telephone service disconnected. Six percent of jobless adults without disabilities did not pay their rent or mortgage, 10% did not pay a utility bill, and 5% had their telephone service disconnected. Fifteen percent of jobless adults with disabilities did not see a doctor if they needed one in the past 12 months and 16% percent did not visit a dentist when they needed one. Seven percent and eight percent of jobless adults, respectively, did not visit a doctor or dentist when they needed one.

Behind food hardships, housing hardships were the most commonly experienced hardship and, specifically, problems with pests such as cockroaches or mice was the foremost type of housing hardship experienced. Eighteen percent of jobless adults with disabilities experienced problems with pests, 7% experienced problems with broken windows or with holes or cracks in the wall or ceiling, 4% experienced problems with non-functional plumbing, and 2% dealt with problems with holes in the floor large enough to trip on. Twelve percent of jobless adults without disabilities experienced problems with pests, 4% experienced problems with broken windows or with holes or cracks in the wall or ceiling, 2% experienced problems with broken plumbing, and 1% experienced problems with holes in the floor.

Table 6.2 Distribution of Material Hardship by Disability Status for Jobless Adults and Employment Status for Adults with Disabilities: 1996, 2001, and 2004 Surveys of Income and Program Participation

	Has Disability, Jobless	No Disability, Jobless	Has Disability, Employed
Food Hardship			
Problems getting enough food	30.5%	16.7%	20.0%
Food does not last	25.5	12.7	16.1
Problems affording balanced meals	23.4	11.2	13.6
Bill-Paying Hardship			
Did not pay some/any of rent or mortgage	11.2%	6.3%	9.5%
Did not pay gas, oil or electricity bill	18.5	10.0	15.4
Telephone company disconnected service	8.0	4.8	6.5
Medical Hardship			
Did not see a doctor when needed	15.3%	7.0%	13.1%
Did not see a dentist when needed	16.0	8.3	15.5
Housing Hardship			
Problem with pests	17.8%	11.7%	16.7%
Problem with broken windows	7.2	3.5	5.9
Problem with plumbing that does not work	4.4	2.2	3.9
Problem with holes or cracks in wall or ceiling	6.8	4.4	6.0
Problem with holes in floor	2.0	0.9	1.2
Unweighted N	9,783	15,111	9,905

Note: All figures are population weighted.

Despite their participation in paid employment and much larger amount of personal income, employed adults with disabilities still experience material hardships at a rate of about two-thirds or, in some cases, equal to that experienced by jobless adults with disabilities. Thus, 20% reported problems receiving enough food, 16% reported problems getting food to last, and 14% reported problems affording balanced meals. Ten percent reported that they did not pay their rent or mortgage in full during the interview month, 15% reported that they did not pay at least one utility bill, and 7% reported that their telephone service had been disconnected. Thirteen percent had not seen a doctor in the past 12 months when they needed one, and 16% had not seen a dentist. Seventeen percent of employed adults with disabilities experienced problems with pests, 6% experienced problems with broken windows or with holes or cracks in the walls or ceiling, 4% experienced problems with broken plumbing, and 1% experienced problems with holes in the floor large enough to catch feet. In most cases, the share of jobless adults with disabilities experiencing material hardships was greater than the share of employed adults with disabilities. However, differences between the share of employed and jobless adults with disabilities experiencing housing hardships with pests, broken plumbing, or cracks in the walls or ceiling were not statistically different at the $p < 0.05$ level.

Differences in Selected Characteristics

It is plausible that some of the differences between groups can be explained by differences in characteristics that are likely to be associated with the ability and decision to work. Thus, I consider the distribution of selected personal characteristics associated with work, including living arrangements, primary reason given for not working, education, sex, and race/ethnicity (Table 6.3). Differences in the distribution of characteristics between

jobless adults with and without disabilities suggest that the population profiles of these two groups are dramatically different. That 70% of jobless adults with disabilities live with a spouse, 42% cite caregiving as the primary reason for not working, and 73% are female suggest that jobless adults without disabilities are overwhelmingly women who are temporarily or permanently at home to fulfill caregiver roles. These women may have chosen not to work because they have a spouse who earns enough to financially support the household. The distribution of characteristics of jobless adults without disabilities, however, suggests that their motives for working are quite different although not as clear cut.

The majority of differences between jobless adults by disability status, and between adults with disabilities by employment status, are statistically significant. Nearly 20% of jobless adults with disabilities live alone, compared to 16% of employed adults with disabilities, and 7% of jobless adults without disabilities. Approximately 50% of jobless adults with disabilities live with a spouse, 8% live with at least one parent, and 23% live with other relatives or friends. By contrast, 70% of jobless adults without disabilities live with a spouse, 7% live with at least one parent, and 15% live with other relatives or friends; and 60% of employed adults with disabilities live with a spouse, 5% live with at least one parent, and 22% live with other relatives or friends. All of these differences are statistically significant at $p < 0.05$ except for the difference in the share of jobless adults with disabilities and the share of employed adults with disabilities living with other relatives or friends.

The lion's share of adults with disabilities report health or disability as the primary reason for not working, although a significant minority (35%) report some other reason. Eighteen percent report not working because of retirement, 10% cite caregiving responsibilities, 3% report their joblessness is involuntary, 3% report no interest in working,

Table 6.3 Distribution of Population Characteristics by Disability and Employment Status for Americans Age 25-64

	Has Disability, Jobless	No Disability, Jobless	Disability, Employed
	Mean (SE)	Mean (SE)	Mean (SE)
Living Arrangements			
Alone	0.192 (0.004)	0.072 (0.002)	0.164 (0.004)
Spouse	0.497 (0.006)	0.701 (0.004)	0.569 (0.006)
Parents	0.083 (0.003)	0.073 (0.002)	0.051 (0.002)
Other relatives or friends	0.228 (0.005)	0.154 (0.003)	0.216 (0.005)
Reason for Not Working			
Health or disability	0.647 (0.005)	0.131 (0.003)	N/A
Retired	0.183 (0.004)	0.215 (0.004)	N/A
Caregiving	0.098 (0.003)	0.416 (0.004)	N/A
Involuntary	0.031 (0.002)	0.099 (0.003)	N/A
Uninterested in working	0.025 (0.002)	0.093 (0.003)	N/A
Other	0.015 (0.001)	0.046 (0.002)	N/A
Education			
Less than high school	0.282 (0.005)	0.184 (0.003)	0.109 (0.003)
High school graduate	0.360 (0.005)	0.337 (0.004)	0.315 (0.005)
Some college	0.269 (0.005)	0.267 (0.004)	0.367 (0.005)
College graduate	0.089 (0.003)	0.212 (0.004)	0.208 (0.004)
Sex			
Female	0.593 (0.006)	0.730 (0.004)	0.548 (0.006)
Race/Ethnicity			
Hispanic	0.116 (0.004)	0.158 (0.003)	0.086 (0.003)
White	0.660 (0.005)	0.652 (0.004)	0.761 (0.005)
Black	0.171 (0.004)	0.121 (0.003)	0.099 (0.003)
Other	0.053 (0.002)	0.070 (0.002)	0.054 (0.002)
Unweighted N	9,783	15,111	9,905

Notes: All figures are population weighted. All differences between jobless adults by disability status are statistically significant at $p < 0.05$ except for the share with some college education and the share who are white. All differences by employment status are statistically significant at $p < 0.05$ except for the share living with other relatives and the share who are of some other race/ethnicity.

and 2% give some other reason. The largest reason given by jobless adults without disabilities for not working is caregiving responsibilities (42%), followed by retirement (22%), health or disability (13%), involuntary joblessness (10%), a lack of interest (9%), and some other reason (5%). Given the large share of jobless adults without disabilities citing caregiving responsibilities as the primary reason for not working, it is unsurprising that nearly three-fourths are women. By contrast, 59% of jobless adults with disabilities are women and 55% of employed adults with disabilities are women.

More than one in four jobless adults with disabilities have less than a high school education, compared to 18% of jobless adults without disabilities and 11% of employed adults with disabilities. Thirty-six percent of jobless adults with disabilities are high school graduates, 27% have attended some college, and 9% are college graduates. Thirty-four percent of jobless adults without disabilities are high school graduates, 27% have some college education, and 21% are college graduates; 32% of employed adults with disabilities are high school graduates, 37% have some college education, and 21% are college graduates. The difference between the share of jobless adults and employed adults with disabilities with some college education is not statistically significant.

Last, there are significant differences in the distribution of racial and ethnic characteristics by disability and employment status. The most striking difference is that jobless adults with disabilities are much more likely to be African American than either jobless adults without disabilities or employed adults with disabilities; 17% of jobless adults with disabilities are African American, compared to 12% of jobless adults without disabilities and 10% of employed adults with disabilities. Twelve percent of jobless adults with disabilities are Hispanic, 66% are non-Hispanic white, and 5% are of a different race or

ethnic background. Sixteen percent of jobless adults without disabilities are Hispanic, 65% are non-Hispanic white, and 7% are another race or ethnicity. Nine percent of employed adults with disabilities are Hispanic, 76% are non-Hispanic white, and 5% are another race or ethnicity. The difference between jobless and employed adults with disabilities in the share who are white is not statistically significant, and the difference between jobless adults with and without disabilities in the share that is of some other race or ethnicity is not statistically significant.

RECEIPT, SOURCES, AND AMOUNTS OF UNEARNED INCOME

What share of jobless adults receives unearned income? What are the sources and amounts of unearned income received by jobless adults with disabilities and how do they compare to those received by jobless adults without disabilities? The primary source of unearned income for jobless adults with disabilities is disability income, either from private disability insurance or public disability cash transfers (Table 6.4a). This is followed by income from assets, retirement income, unearned income from other sources, and unemployment compensation. The 20% of jobless adults with disabilities who consider themselves retired realize the largest amount income, receiving approximately \$1,500 per month, followed by an average of \$1,050 per month for the 1% receiving unemployment benefits, \$1,000 per month for the 54% receiving disability benefits, \$650 for the 14% receiving unearned income from other sources, and \$134 for the 31% receiving asset income. In comparison, the primary source of unearned income for jobless adults without disabilities is asset income although, conditional on receipt, the average amount of asset income is not large (\$178 per month) (Table 6.4b). This is followed by retirement income (17%), disability income (10%), income

Table 6.4a Receipt and Amount of Unearned Income by Source and Selected Characteristics for Jobless Adults with Disabilities Age 25-64: 1996, 2001, and 2004 Surveys of Income and Program Participation Panels

	% Receiving					Conditional on Receipt, Amount				
	Asset	Disab	Retire	Unemp	Other	Asset	Disab	Retire	Unemp	Other
Overall	31.4%	54.3%	19.9%	1.0%	13.7%	\$133.62	\$997.57	\$1,530.12	\$1,050.27	\$649.11
Living Arrangements										
Alone	26.2%	70.1%	21.4%	1.4%	26.5%	\$153.42	\$1,033.08	\$1,478.18	\$1,037.21	\$457.11
Spouse	43.8	43.0	24.7	1.0	6.7	\$130.53	\$1,068.12	\$1,599.87	\$1,182.94	\$938.04
Parents	11.2	71.7	6.6	0.2	11.3	\$94.91	\$829.05	\$1,176.83	\$569.11	\$508.05
Other relatives or friends	16.1	59.0	13.0	0.8	19.1	\$134.77	\$924.70	\$1,377.94	\$737.64	\$680.96
Reason for Not Working										
Disability or health	22.7%	72.1%	11.2%	0.3%	16.0%	\$91.50	\$988.98	\$1,358.01	\$850.17	\$541.04
Retired	58.3	31.9	63.7	0.4	14.8	187.23	1,131.03	1,666.25	1,401.71	1,035.72
Caregiving	35.5	9.3	4.1	0.5	4.3	94.38	729.15	1,474.54	801.04	675.55
Involuntary	20.6	12.8	5.0	16.6	1.9	45.44	857.96	1,263.39	1,117.88	799.87
Uninterested	49.8	7.2	12.5	2.0	4.7	269.11	920.71	982.22	1,033.69	852.94
Other	41.2	18.9	8.7	4.7	4.5	244.60	783.18	777.31	934.54	1,111.91
Education										
Less than HS	15.5%	63.0%	15.2%	0.5%	14.9%	\$62.87	\$904.90	\$1,218.81	\$72.02	\$424.07
HS graduate	30.4	51.6	19.6	1.0	13.4	106.67	943.74	1,387.62	1,132.83	577.80
Some college	38.6	53.0	21.8	1.5	14.1	124.88	1,099.70	1,588.90	1,030.82	824.59
College grad	63.5	41.2	30.1	0.8	10.4	256.20	1,319.66	2,272.72	1,409.28	1,317.86
Sex										
Female	32.9%	47.6%	15.3%	0.8%	14.2%	\$134.71	\$869.09	\$1,142.02	\$923.97	\$536.25
Male	29.1	64.0	26.6	1.3	13.1	\$131.82	\$1,136.72	\$1,855.86	\$1,165.79	\$826.82
Race/Ethnicity										
Hispanic	17.3%	49.4%	10.8%	1.5%	10.1%	\$52.53	\$858.13	\$1,341.85	\$1,148.25	\$524.30
White	39.1	52.9	23.3	0.8	13.8	149.47	1,031.43	1,581.74	1,080.73	695.82
Black	13.2	63.9	15.4	1.4	16.0	61.97	998.21	1,314.46	927.37	440.10
Other	25.0	50.6	11.7	1.2	14.0	70.99	851.99	1,416.98	992.25	1,045.35
Unweighted N						9,783				

Note: All figures are population weighted.

Table 6.4b Receipt and Amount of Unearned Income by Source and Selected Characteristics for Jobless Adults without Disabilities Age 25-64: 1996, 2001, and 2004 Survey of Income and Program Participation Panels

	% Receiving					Conditional on Receipt, Amount				
	Asset	Disab	Retire	Unemp	Other	Asset	Disab	Retire	Unemp	Other
Overall	45.7%	10.0%	17.3%	2.5%	3.9%	\$178.00	\$946.73	\$1,870.51	\$1,174.91	\$982.94
Living Arrangements										
Alone	44.4%	25.3%	36.6%	3.9%	14.8%	\$314.03	\$1,034.88	\$1,982.94	\$1,061.45	\$882.79
Spouse	55.3	5.8	17.6	1.7	2.5	169.22	952.24	1,908.48	1,309.97	1,207.90
Parents	12.8	23.7	6.5	2.7	2.5	179.64	957.04	1,600.75	892.63	393.41
Other	18.6	15.5	12.0	5.1	6.0	143.77	862.51	1,524.81	1,079.91	782.60
Reason for Not Working										
Disability or health	20.4%	52.6%	9.0%	1.1%	8.2%	\$86.47	\$990.21	\$1,378.90	\$1,017.80	\$499.07
Retired	58.3	31.9	63.7	0.4	14.8	289.99	929.16	1,963.80	1,258.30	1,300.99
Caregiving	46.2	1.7	1.6	0.6	1.4	115.99	687.74	1,261.84	1,074.81	852.94
Involuntary	25.5	1.6	4.1	17.6	0.8	88.34	728.90	1,801.55	1,217.54	742.25
Uninterested	53.3	2.3	5.6	0.9	2.2	181.27	730.56	1,250.10	858.09	963.13
Other	36.8	1.1	2.9	3.6	0.9	182.66	782.41	1,772.19	1,127.25	801.22
Education										
Less than HS	17.0%	15.1%	11.2%	1.8%	4.6%	\$89.48	\$771.78	\$1,314.63	\$1,040.81	\$743.02
HS graduate	38.9	12.3	17.4	2.5	4.2	122.78	999.09	1,636.35	992.63	797.31
Some college	53.3	8.1	17.6	3.0	4.2	159.02	944.97	1,838.95	1,126.39	1,151.75
College grad	72.1	4.2	22.1	2.4	2.7	261.33	1,253.78	2,440.64	1,628.99	1,473.05
Sex										
Female	48.3%	6.8%	11.2%	1.6%	3.9%	\$160.10	\$772.34	\$1,416.44	\$1,012.35	\$826.34
Male	38.7	18.6	33.7	5.0	4.1	238.32	1,118.53	2,278.93	1,313.22	1,380.38
Race/Ethnicity										
Hispanic	20.4%	7.4%	6.3%	2.2%	2.4%	\$89.37	\$805.61	\$1,341.85	\$862.64	\$987.70
White	57.6	9.2	21.3	2.4	0.8	197.13	149.47	1,040.73	1,962.60	1,274.33
Black	16.9	19.4	14.6	3.1	4.4	80.68	793.82	1,584.32	1,069.30	568.21
Other	41.5	7.1	9.4	2.5	2.0	96.10	860.39	1,494.29	1,122.29	721.35
Unweighted N						15,111				

Note: All figures are population weighted.

from other sources (4%), and unemployment compensation (3%). Conditional upon receipt, retirees receive the largest amount of income (\$1,871 per month), followed by unemployment compensation (\$1,175), other income (\$983), and disability income (\$947).

Important variations appear when income receipt and amounts are disaggregated by selected characteristics. Notably, among the percent receiving disability income varies significantly by living arrangement. Whereas 70% of jobless adults with disabilities living alone and 72% of those living with their parents receive disability benefits, only 43% of those living with a spouse and 59% of those living with other relatives or friends do. Furthermore, those living with their parents receive the least per month in disability income at an average of \$829 per month, about \$150 less than the overall average. In general, those either living alone or with a spouse are the most likely to receive each type of income (with the exception of disability income) and, conditional on receipt, also receive more money on average than those with different living arrangements. Although only 10% of jobless adults without disabilities receive disability income, approximately 25% of those living alone and those living with parents do. In comparison, only 6% of those living with a spouse and 16% of those living with other relatives or friends do. Those living with parents or other relatives are also far less likely than others to receive asset income. Those living alone are much more likely to receive retirement income or income from other sources. Conditional on receipt, those living alone or with a spouse receive the largest amounts per month from any source.

Not surprisingly, the highest percentages receiving each type of income roughly correspond to the reason for not working. Thus, nearly three-fourths of jobless adults with disabilities citing health or disability as the primary reason for not working also receive disability income, and 64% of those citing retirement as the reason for not working also

receive retirement income. With the exception of asset income, retirees receive the largest amount, on average, in each category of unearned income. 53% of jobless adults without disabilities citing health or disability as the reason for not working receive disability income, and 64% of those citing retirement receive retirement income. Those not working because of health or retirement are also the most likely to receive income from other source, though the average amount received conditional upon receipt varies greatly. The 8% of those not working because of health receive \$500 monthly from other income sources, and the 15% of those not working because of retirement receive \$1,300 from other sources.

The type and amount of income received varies significantly by level of education. Among jobless adults with and without disabilities, those with less than a high school education are the most likely to receive disability income (63% and 15%, respectively). However, conditional on receipt, those with a college education receive the largest amount of disability income per month (\$1,320 for college graduates with disabilities and \$1,254 for those without disabilities). Those with a high school education or less are the least likely to receive income from assets or retirement income and, conditional on receipt, they receive substantially less. The variation by education in the share receiving unemployment or other unearned income is not great but, as with other types of unearned income, those with a college education receive much more than those with less than a college education. These patterns are similar across disability status, and the amount of difference in unearned income amounts is fairly consistent across levels of education.

With the exceptions of asset and other income, women are less likely to receive income from each unearned income source relative to men, and this pattern is consistent across jobless adults with and without disabilities. Conditional on receipt, women receive

less from each source of income relative to their male counterparts. The most notable pattern in income receipt by race and ethnicity is the difference between African Americans and other racial and ethnic groups. Across both adults with and without disabilities, African Americans are the most likely to receive disability income (64% of adults with disabilities and 19% of adults without disabilities) and to receive income from other sources (16% of adults with disabilities and 4% of adults without disabilities). However, they also receive the least of any racial/ethnic group from either source (\$1,314 and \$440, respectively).

SUMMARY

Although no specific hypotheses were tested in this chapter, the analyses suggest several conclusions. First, that while jobless adults with disabilities receive a relatively large amount of personal monthly income, they live in households that are much poorer and they face significantly more material hardship on all four of the dimensions considered here than jobless adults without disabilities. Second, that employed people with disabilities have a larger amount of personal income from all sources relative to jobless adults with disabilities. However, a full 60% still receive unearned income from any source, in addition to their earned income. Furthermore, like their jobless peers, they also live in relatively poor households and working appears to confer only a slight reduction in the share living with material hardship along some dimensions (food insecurity, bill paying hardship), and not at all along other dimensions (health care, housing). Third, that, while disability-related unearned income is a major income source for jobless adults with disabilities, nearly 50% of jobless adults with disabilities who receive unearned income do not receive any from disability-related sources.

CHAPTER 7: THE MECHANISMS OF LABOR MARKET INEQUALITY AND EXPERIENCES OF DISCRIMINATION

Data collected during in-depth interviews with working-age people with disabilities and disability service professionals can shed light on the mechanisms that underlie observed relationships in the quantitative data. Interviews ranged broadly over informants' full employment careers, so that the narratives below reflect both their current and past experiences with employment. This chapter draws out the narratives that suggest explanations for:

- The persistence of discrimination in the face of civil rights protections
- The mechanisms that operate to systematically sort people with disabilities into lower-paying occupations
- The seeming inability of a college degree to overcome the negative effects of disability discrimination
- The decision-making around whether or not to work for recent birth cohorts of people with disabilities

THE PERSISTENCE OF DISCRIMINATION: HOW DOES EMPLOYER DISCRIMINATION GET ENACTED IN AN ERA OF DISABILITY CIVIL RIGHTS?

The accumulated evidence on discrimination in hiring, pay, promotions, and terminations points to the continued practice of employer discrimination against people with

disabilities in all of these areas. This remains true even after the passage of the 1990 Americans with Disabilities Act against “otherwise qualified individuals” on the basis of disability. Second, it includes provisions mandating that employers provide “reasonable accommodations” to allow otherwise qualified employees to work.

Whether or not an applicant is qualified is generally understood in terms of whether they can perform the “essential functions” of a job. One of my key informants defined essential job functions as the “critical elements of the job” or what an applicant needs to do in order to be successful in the job. Moreover, essential job functions must be fixed attributes of the job, and cannot vary from person to person – thus, discrimination is occurring if employers are asking one applicant whether they can drive but not another. Whether an accommodation is reasonable is usually interpreted in terms of how much it costs. Several of the key informants I spoke with cited findings from government-sponsored research that the majority of accommodations were less than \$500 and many were free. Nevertheless, these informants relayed a widespread perception among employers that accommodations will always be unreasonably costly and thus, some employers may actively resist providing accommodations.

The narratives provided by the people I spoke with suggest that – at least, at the point of hire – the language of qualifications and accommodations found in civil rights legislation shapes the forms that employer discrimination takes. In particular, employer discrimination during the hiring process appeared to take on two main forms: First, attempts to disqualify applicants with disabilities during the job interview, and second, refusals to consider how reasonable workplace accommodations might be made for otherwise qualified applicants with disabilities. From the accounts provided by

respondents and service professionals, the normal job interview script for job seekers with disabilities appeared to be one in which employers had already decided against hiring the applicant with disabilities and the task for the job seeker was to change the employer's mind. The practice of prospective employers using the job interview as a vehicle to prove how the applicant with disabilities was disqualified appeared to be so common that some vocational rehabilitation counselors spoke of providing training on how to "overcome employer objections" to hiring job applicants with disabilities for an open position or "answer the unasked questions" in a potential employer's mind about the ability of applicants with disabilities to fulfill the duties of the advertised position during interview workshops. As one vocational rehabilitation counselor I spoke with explained:

"[I]f somebody has an obvious disability, then the individual needs to be able to deal with the unanswered, the unasked questions in the employer's head...I used to teach interview classes and I would say, 'You've got to be able to answer the unasked questions, but answer it in a way that's not talking about your disability.' So that you could say somebody that comes in to be interviewed and they're in a wheelchair and that person needs to be able to slide into the interview that, 'One of my strengths is that I never missed a day of school. I met all the deadlines.'...[I]f somebody knows ahead of time that somebody's coming in who's disabled, I think they've set all kinds of barriers up in their mind. And then it may be up to the individual to overcome those preconceived notions. So the person can either do it right or do it wrong."

Similarly, an ADA assistant coordinator working for a New England state explained that, for people with visible disabilities, employer objections would always be an issue:

"You basically say, [I have a disability] 'but I'm perfectly able to do the job.' You always want to make sure that the employer and the employee know you're not focusing on your disability; you're focusing on your ability to do the job. So it's about reassuring the employer, the potential employer, that you can do the job. If it's a disability where you think you're going to need an accommodation, but again focus on the positive side of it. If you don't think you need an accommodation, don't say it, because even though employers say, 'We don't discriminate,' please; it's in the back of their minds."

Some respondents talked about how they were surprised to encounter objections in the job interview when they first began interviewing for jobs after graduating from college.

After the first interview, however, respondents grew to expect employers to raise objections to their candidacy in every interview. Although disability service professionals and people with disabilities themselves identified the employer practice of raising objections as discriminatory, they came to accept it as a standard feature of the job interview process. Katie, age 28, describes her experiences with the process of overcoming objections in the job search:

“When I first started, like I said, my degree was in elementary special ed. and I obviously use crutches to walk. And, the very first interview I ever went on at a school, I could see in the person’s face that when I walked in with crutches: They certainly weren’t expecting it. And they certainly weren’t sure how to deal with it. ... And to me, just from their body language, and just from their facial expression, and just from their tone, the interview was over before it even started...[Sometimes the objections are overt], but I think most of it to me is just feel. And I sometimes wonder if now, when I go in, I’m expecting it. So I’m like: ‘Oh, go ahead. Do it to me. Go.’ And so I’m making it happen in my head. I’m not sure, but I definitely know at the beginning when...it’s your second job interview of all time and you get that sort of question mark over the interviewer’s head, it doesn’t inspire confidence... You really need to think about how it comes out of your mouth, to put your strengths forward. And I think that that’s really hard to do when you’re nervous and you really want it and you’re like: ‘Am I doing it right? Am I saying the right thing?’ And it’s a very difficult thing to do and I think that people don’t kind of give credence to how difficult it is when you have an obvious sort of flaw - how to downplay that and play up what is most important. Because, obviously, if someone said to me: ‘Will you need accommodations on the job?’ my answer will have to be ‘Yes. However, they are minimal.’ You know? Like...it, it...and it just feels like you have to justify... I shouldn’t have to justify. I shouldn’t have to say ‘but they’re minimal’ to get them to be like: ‘Oh. Ok. Good. [Sigh of relief.]’ I should just be able to go ‘Yes,’ and they should go ‘Ok, what are they?’ and you know...instead... it feels to me that like, there’s sort of a constant pull.”

Several key informants who worked with discrimination claims under the ADA confirmed that one of the ways in which employers appeared to be discriminating against people with disabilities was by selectively modifying the essential functions of the job in order to disqualify applicants with disabilities. One informant described a case she was involved with:

“I did have a case, not too long ago, where [an] employee was...applying for a new job. He had a visual impairment and it was brought up quickly that he had to do some reading on the job that wasn't required previously. It was kind of like tucked in and, to his knowledge, he's the only person that was made aware of this thing in such a way. He didn't get the job and he filed a complaint and he won because they were...trying- in our opinion- to say that you're not qualified for this job, and he's like, ‘This is not even part of the job.’ You know, it's one of those nebulous things [where] they just try to say, ‘Oh, this is how we can get him.’”

Another informant described a case that also involved an employer's attempts to disqualify a job applicant, where an employer had extended a conditional job offer, which was subsequently rescinded when it became apparent that the job applicant had a disability:

“We had a case a while ago that was clear cut...about an employee who was looking for a job at an airline and they were teaming to drug screening their applicants, which is not considered a medical test under the ADA, but the drug screen disclosed he was taking some antipsychotic medications. So that was a red flag. And they had made him a conditional offer for employment then withdrew it, and they argued about the timing of that withdrawal. But it was pretty clear to us that, you know, when they saw the drug he was on, they were like 'No, thank you.' [laughs] So we were successful after two or three years of getting, we settled his lawsuit favorably for damages on that. But that was, I mean to us it was pretty clear indisputable fact and they really tried several ways to back out it. You know, they didn't have much they could to argue. They tried to argue they never offered him a job but that was clearly easy to prove they had.”

When employers raised explicit objections to hiring applicants with disabilities in the interview, the objections sometimes revolved around their view of applicants with disabilities as “liabilities” or skepticism that applicants with disabilities would be able to navigate public transportation systems in order to arrive at work on time. Additionally, in the course of trying to overcome employer objections to their candidacy, respondents would often discuss possible job accommodations that would eliminate or reduce obstacles to performing the advertised jobs. However, employers frequently remained unconvinced that the proposed accommodations would mitigate their concerns. For example, Melissa, age 31, explains that, after graduating from college, she had multiple

job interviews that she described as “going nowhere” because of the objections that potential employers would raise. When I asked her to elaborate on the kinds of things that employers would say she gave the following illustration based on a short-term position she tried to obtain with an early childhood program:

“MELISSA: I was interviewed by an intern [who] said, ‘Oh, you’d be great for this position. You’re absolutely wonderful.’ ...I called her back, I was all excited I was going to work at [the employer’s organization]...I called her up and said, ‘I can take the job! I can take the job!’ and she called me [back] and she said, ‘I misspoke.’ She said, ‘They feel like somebody like you would be a liability to the children.’

INTERVIEWER: ‘Like you?’

MELISSA: So I came back and said, ‘Look,’ I said, ‘If they’re having issues because I can’t run and they don’t feel comfortable with me going outside with the kids, then another teacher’ -because I’m an improviser - ‘If you don’t want to work it this way then we can do it this way.’ So I said if they think it’s a liability in terms of being outside, I’ll go out, you know, I will watch another teacher’s classroom while the other teacher takes my kids outside, and do the 50-50 thing. No, that was dead in the water.”

Similarly, Shelby, age 26, recounted an interview for a clerical position with a local high school where the interviewer, clearly uncomfortable with her disability, suddenly blurted out: “Well, I think you would be a liability.”

Other employers did not couch their concerns in terms of liabilities, but were nonetheless resistant to making accommodations. For example, Fred, age 51, who uses a wheelchair, described an interview with a local disability service agency in which a prospective employer expressed unwillingness to provide accommodations:

“FRED: I tried getting hired at [local disability service agency]...Actually, a friend of mine knew of a position opening there before they advertised it so I got my foot in the door pretty quick. I was a great candidate for it. Office work mostly, and then working with kids with behavior problems, you know – which I [was already doing] on a volunteer basis...So, I went to apply...When I got into the building, the building was accessible, but when I went to the office where I was supposed to work, I couldn’t get into the office.

INTERVIEWER: Was the door too narrow?

FRED: No. The door was fine, but right at the door was a filing cabinet and...there was not enough space to get past the filing cabinet. But even if I could get past the filing cabinet, there were so many desks in there, just walking space only. They would have had to rearrange their entire office if they hired me. When I got there, you know, I'm looking at them, 'Hi, I'm [FRED MEYERS]. I'm here for the interview,' and the interviewer looks at me and goes, 'Oh, gee.' She's looking around and she's like, 'We can't do this here.' So, she comes out in the hallway, 'I'm so-and-so. We'll go over here to this room.'...She looks over at me and says, 'Well, you do qualify, but you'll be working in that office that you stuck your head in. It's just not going to work.' I wasn't as knowledgeable about the ADA as I am now, so [if it happened to me now] I would have made a big fuss about it."

Transportation

Katie's narrative suggests that employers may be particularly prone to use transportation as a means to disqualify job applicants with disabilities. At the time I interviewed her, Katie worked part-time with a local organization in a position where her primary responsibility was to collect the perspectives of people with disabilities on a variety of issues, including employment. She mentioned that, even if job applicants can secure reliable transportation to and from work, transportation may be used in such a way in order to deny job applicants with disabilities. In these cases, transportation is raised as an issue in the interview, with employers emphasizing the importance of having a driver's license and car to performing the job, even if driving is not listed in the job description and/or it becomes clear that driving is not an essential function of the job. In some cases, prospective employers may question the ability of the respondent to get to work on time, even in the face of repeated explanations that the applicant can do so. Two incidents related by Katie illustrate this point. In the first, she relates her own experience with an interview in which an interviewer expressed disbelief and skepticism that she would be able to make it to work on time despite her repeated protestations that she could:

“I had someone say to me, ‘Do you have a car?’ And I said, ‘No, I don’t.’ And he said, ‘Well, how do you intend to get to work every day?’ And I responded, ‘I got to this interview, didn’t I?’ And he said, ‘Well, yeah, but if you don’t have a car...’ and I said, ‘Yeah, but if I go to this interview and I know I need transportation to get to work every day,...why would I have interviewed if I didn’t think that I could make it to work every day?’ [Every] so often, we [would have to have] a meeting at another building across town [and the interviewer asked] ‘So how are you going to get there?’ And I said, ‘Well, there is a public bus, is there not?’ ...They were like, ‘Well, no one can just give you a ride. It doesn’t work that way. I can’t just have this guy drive you around all day.’”

The second instance that Katie related to me actually occurred when she was completing an assignment for a college class in which she had to help a recently graduated student with disabilities obtain a job. In this case, the employer initially refused to interview the job applicant upon seeing that she did not have a driver’s license. After Katie convinced her to interview the applicant, the employer introduced the ability to drive as an essential job function and emphasized it during the interview. Katie and the job applicant pointed out that driving was not listed in the job advertisement, which was for a job tutoring teenage students, and it became clear that a reasonable accommodation might have been made in which the job applicant would ride along with another tutor in the same car. Despite Katie and the job applicant’s attempts to secure a reasonable accommodation, the interviewer denied their requests:

“[The interviewer] knew prior to the interview that [the job applicant] didn’t have a license, because I had told her. So once we sat down, [the interviewer] did apologize [for initially refusing to give the interview]. And I showed her the job description that didn’t say anything about a license. And she apologized and sort of listened to what the strengths of this person were, and then we talked about possibilities. I said, ‘Is there a possibility that [the job applicant] could ride with someone else?’ [Quoting the interviewer] ‘Oh, we’ve done that before and the two [tutors] always end up chatting with each other and hanging out and not really chatting with the kids.’ [I just thought this was an unreasonable answer because] if you specify to *your employee* before this situation occurs that the situation is occurring based on a transportation need and the two of you are not to be consorting – your job is to be with the children – I would assume, that if they are qualified individuals, that they will do that. And she was basing – on one situation that they had been through before – that it was not going to work. We talked about two or three other options...And it was just this one-by-one knocking off the

reasons why [the job applicant] couldn't [be hired], when she barely listened to the reasons why she could [perform the job]."

When I asked one of my key informants, whose primary job responsibilities included the interpretation of Title I of the ADA, to clarify whether adding the requirement that an applicant has a driver's license was allowable under the ADA, she explained:

"...What employers are allowed to ask is, 'Can you do this job with or without a reasonable accommodation?' So the person can say yes or no. So the person is also, during the interview, you're interviewing the company as well as the company is interviewing you, so you should be able to say, let's talk about [requiring applicants to drive a car]. You can understand what the total job is [and] if driving is a minimal part of the job, can an accommodation be made? [To illegally] make a request for a driver's license [is to require a license] when it may be something that somebody else can do, when it's not a significant part of the job, an 'essential job function,' those would be the words from the ADA. [The employer should ask] 'Is there something that this person can do in place of driving that somebody else can do, you know, a little bit of job swapping?' I mean, to require a driver's license for many jobs is just, you know, a way to prohibit somebody from getting the job. That's not right. A lot of people, you know, may not have a driver's license for whatever reason. It may have nothing to do with disability, you know?...If you have your driver's license that doesn't mean anything. Show me how driving is important to this job."

OCCUPATIONAL SORTING: WHAT ARE THE MECHANISMS THAT STEER PEOPLE INTO SOME JOBS OVER OTHERS?

Several mechanisms contributing to the sorting of people with disabilities into certain jobs (some more likely to be relatively lower-paid) over others. These mechanisms included the choice of part- over full-time work, the funneling of people with disabilities into jobs that serve people with disabilities, and sorting people with disabilities into jobs focused on food service, custodial, and clerical duties. The interview data suggest that, even when people with disabilities were hired as professionals, they were pushed into duties that were spatially located in a hidden location, completing duties (often clerical) that did not match their job titles. These findings match what Robert and Harlan (2006) found in their large-term study of public sector employees with disabilities. They found

that employees with disabilities were physically segregated from other workers without disabilities with the same job title, generally placed in backrooms or the mailroom. In other cases, workers with disabilities were placed in “set-aside jobs,” jobs located in a segregated, noncompetitive worksite informally known as “the dumping ground” (p. 616).

Voluntary part-time workers

Overall, it appeared that many people with disabilities were choosing to work part-time for an assortment of reasons. Some, like Maria, age 34, felt that it was no longer feasible to work a full-time position as an elementary school teacher because of the fatigue accompanying her progressive multiple sclerosis.

“I guess that I feel like [my ideal work situation has] changed, because I'm really- I enjoy, I love being with young kids - but I know that being in a setting where there's fifty things that are going on at once, and that my attention has to decide which way to go, I know that because of my MS, I can't do that very well right now. And so, for me, the thought of working in a classroom as a teacher - it doesn't seem like an option.”

Katie, who had also been pursuing work as a teacher described the first time she realized that she could not handle the physical demands of working full-time in a classroom:

“I think that I started to learn that [teaching full-time is physically too much] when I was student teaching. That was an interesting situation for me because you go from teaching in little snippets, small groups of children. [I thought,] ‘Oh, well I’m good at this. I can teach six kids. Alright, I know what I’m doing. I’ve got it all under control.’ Suddenly you have twenty-five and you have to plan every single subject as opposed to one. That was an eye-opener for me. When I was getting ready to graduate and looking at my advisor going, ‘Can I really do this? In a classroom? I don’t think I can. I think I’m going to fall on my face and die. I don’t think I can do a whole day.’ Because, physically, as I start to get tired, I’m less mentally on top of what is going on. I start to lose...focus, and once I’m gone, the kids are all over the place.”

Melissa also indicated that her health did not permit her to work part-time, but she also felt that working part-time still amounted to a full work week for her due to the additional time she needed to devote to getting ready for work. Melissa also mentioned that she felt

working full-time would result in losing access to Medicaid and Medicare, and she expressed doubt that full-time earnings be enough would cover the personal care attendants services and wheelchairs she needed. Last, she felt that forcing herself to work full-time because others felt she should would result in a serious reduction in her quality of life.

“First of all, physically, I would only be comfortable working about 25 solid hours a week. Forty would be too much for me to be in a wheelchair. Too much physically, you know, my eating needs, whatever. Secondly, transportation alone – if I work 5 days a week, that’s \$35 a week that doesn’t include extra work meetings, extra mini-things you got to do, it’s a lot of money on transportation. Thirdly, hours. I’m going to get a little bit personal - you [speaking to the interviewer] probably got up this morning and were ready in 20 minutes. I get up in the morning and, to look okay...and not be rushed, I need a solid two hours...Plus, I need help to dress sometimes. I need help to be able to eat. I need, you know, those kinds of things.... But, you know, [even if I could get these accommodations] I could never afford to [work]. [If] I lost my Medicare and Medicaid, I could never afford to pay for my personal care services on my own, ever, *ever*. I could never afford to pay for repairs to my walkers, my wheelchairs, that kind of stuff.”

Melissa’s comments about the costs of personal care services and assistive devices such as wheelchairs were echoed by Henry, age 55. Whereas Melissa was unemployed at the time I spoke with her and received a modest monthly income from SSDI, Henry and his wife collectively earned well over \$100,000, most of which came from Henry’s salary. Although Henry was a successful full-time professional with access to private health insurance, he relied on the universal health insurance system in Massachusetts to purchase the daily personal care attendant (PCA) services and wheelchairs that he needed. In explaining how expensive these necessary services were, he also underscored how indispensable they were to maintaining the health of his marriage.

“The state also pays for [my] wheelchairs, which are important. I mean, this thing right here [gestures to his wheelchair], this is not an electric wheelchair [and] this is \$5,000 – which is crazy. I mean, that’s because healthcare is so screwed up. I’ve just ordered an

electric wheelchair...[It's] upwards of \$20,000 for an electric wheelchair...But anyways, the government or my insurer or a combination of the two – I don't know, that's crazy – are paying for the thing...The PCA is so huge. I can't deny that I could not [use the PCA], [but without the PCA] I could probably not work...[It costs] \$10,000 [for me] to get out of bed. That's OK. [The alternative is that my wife] gets me up - and that's not a good way to conduct our relationship or marriage, you know - she either takes on this stuff [and] she doesn't work [because she's taking care of me]...The likelihood of us being able to maintain a marriage in that kind of situation would be marriage hell. So the PCA is beyond- I don't think that it's possible to overstate the importance of them."

Disability jobs

A recurring theme in interviews was how respondents had either gravitated towards jobs working with people with disabilities or on disability-themed topics or had been funneled towards such jobs – what I call “disability jobs”. These jobs include jobs with disability organizations, niche jobs within more general organizations (private or public) that serve/target people with disabilities, or jobs that require respondents to talk about their disabilities in some way.

Some of the employment in disability jobs is voluntary. Some view working with and for the disability community as a “calling” and/or see themselves, as people with disabilities, as the best candidates to serve the disability community. Michael, age 52, worked as a training director for a large company for 17 years when an accident at work forced him to disclose the fact that he has epilepsy. Despite numerous positive workplace evaluations and a letter from the company's CEO commending him for his work, Michael was let go from the company shortly after recovering from the injuries sustained in his accident.

“I had had a seizure at work or I fell [it wasn't clear what happened]; and whether or not it was a seizure, I had a medical alert bracelet on. My medical alert bracelet was on. And when the...EMTs came, they said: ‘Oh, he's an epileptic.’ And that was the beginning of the end because, at that time, I never told anybody that I had epilepsy.”

Michael described his sudden termination as a shift from being the company's "fair-haired boy to all of a sudden being a liability." Michael felt that his termination changed the way he thought about disability and changed his life. Michael viewed his termination as a wake-up call and began to intensively volunteer with people with disabilities, eventually securing a position as an ADA coordinator for a state agency. At various points during our conversation, Michael describes his volunteer and professional work helping people with disabilities and attempting to change attitudes about disability as a vocation or a calling.

"I lost my job after a worker's compensation injury, after a surgery, and then after finally getting through all of that, getting back to work, and then losing my job within a two-week period. And I had fallen on company premises and whether or not it was illegal, it was at least immoral and unethical as to what had happened. But it was a good thing because you either become bitter or you become better when that happens. And I think in this particular instance, it's been twenty years and I think I've become better for...the experience...

...I [feel] that I have a...resolve at this point in my life that, whatever I'm going to do, I'm not going to change the world, but if I could help one person...I've accomplished something...Robert Kennedy [talked] about sending a ripple of hope when you do something, you may not change the world, but if everybody attempts to make a change, all those little ripples then start doing something. But you need those ripples. You need people to start and to realize that other people need to talk about people with epilepsy...or whatever the disability is. So people realize that people have competencies; the mere fact that you're disabled doesn't mean that you can't work...

...Mahatma Gandhi says, 'It's not the action, not the fruit of the action that's important. You must do the right thing' It may not be in your power to, there may not be enough time, be any fruit, but that doesn't mean you stop doing the right thing. You may never know what results come from your action, but if you do nothing there'll be no results. Therefore, let's do something.' I think that's something...about sowing and about trying to change attitudes- that you have to start somewhere."

Maria also expressed being drawn to disability advocacy and disability rights work:

"And I know that working with disability rights stuff feels – it just feels like a good place for me to be right now. Partly it's because I think [disability organizations] understand, but another, bigger part of me [feels like it is] very much work that I want to be supporting because I just agree with it [and it pushes] things that I want to see advance forward."

For others, employment in disability jobs did not appear to be strictly voluntary, but rather a direct result of the narrow opportunity structure that people with disabilities face when seeking and obtaining employment. In some instances, it was apparent that employer decisions funneled job applicants with disabilities into disability jobs, as in the case of Melissa. When discussing some of her failed attempts to secure job interviews, she listed some of the responses for non-disability job opportunities she would get over the telephone: “There are places for people like you” or “We’re not equipped for you.” In other cases, it appeared that, after unsuccessfully trying to make a go of it in a non-disability-related occupation, individuals would seek out self-employment opportunities that capitalized on their disability experience. For example, Mitch, age 37, struggled to find work as a journalist but, after an out-of-court employment discrimination settlement and years of sporadic freelance work, he eventually turned to earning money through giving motivational speeches about his disability at local schools. Similarly, after failing to find work in the communications field, Shelby began to self-publish a series of children’s books about characters with disabilities and focused on turning an internet-based database of disability-related resources she had created on a lark into a full-fledged business.

Food, Filth, and Filing (and human services jobs)

During the course of our conversation, Katie mentioned multiple barriers that she personally faced in obtaining employment as well as barriers she had observed others encountering during her work with a local disability organization. After I turned off the voice recorder, she brought up that she and others in her workplace referred to the kinds of jobs people with disabilities tended to get fell into what she called “the three Fs”.

When I asked her to elaborate, she said that the three Fs referred to “Food, Filth, and Filing,” where people with disabilities were most likely to work in the areas of food service, custodial, and clerical jobs.

When I asked disability service professionals about this designation, they largely agreed with the tendency of people with disabilities to work in these areas, with the caveat that people with certain types of disabilities were more likely to work in one area than another. For example, one individual affiliated with a local service organization for the blind told me that many blind individuals are funneled into call center jobs, whereas individuals working with organizations serving clients with developmental disabilities were likely to place their consumers into custodial, lawn care, assembly, and paper shredding jobs. However, assignment of “three Fs” type duties was evident for some workers with disabilities who had obtained professional jobs. For example, Melissa, who had been hired as a pre-school teacher in an early intervention program, was assigned to shred paper all day in a back room instead of performing the teaching duties she had been hired to complete:

“There were times that instead of [working with the children] – I love to shred paper, it’s relaxing to me, it gets rid of frustrations; I love to paper shred. But they would have me paper shredding for 8 hours, and it’s like, ‘Wait a minute. [If] that was part of my contract, that I’m your paper shredder and that’s what you’re paying me for, fine. But I have more intelligence than to [just] shred...If there’s nothing else for me to do and you’re giving me busy work, fine. But if you’re blatantly giving me busy work because you can and you don’t want me with the children: that’s discrimination.”

Others referred to the large number of people with disabilities looking for jobs in the human services field, either as social workers or special education teachers. One vocational rehabilitation counselor identified this as particularly problematic because many of the entry-level jobs in the human services field required job incumbents to drive

to their client's homes, which could often be located in rural or other areas inaccessible by public transportation.

CAN A COLLEGE DEGREE MITIGATE THE MECHANISMS CONTRIBUTING TO DISABILITY LABOR MARKET INEQUALITY?

Some respondents spoke directly to the value of a college degree, many of whom were of an age to directly benefit from the more inclusive education mandated by the 1975

Individuals with Disabilities Education Act (IDEA). Most of the college graduates I spoke with had a situation similar to Shelby, where it was expected that they would attend college after graduating from high school:

“It wasn’t a really a question that I wasn’t going to get my degree. It wasn’t something that – my brother finished high school, he went on to college, he got his degree, got a job, and the same expectation was held for me. So it wasn’t like ‘[SHELBY] has a disability and she [isn’t] going to go to college.’ Ok, so I went to college.”

Despite the routine expectation that young people with disabilities would attend college, they were also the most pessimistic about the ability of a college education to overcome the barriers to full employment faced by people with disabilities. As Melissa states:

“Let me tell you the truth about something. The truth is: Yes, I enjoyed college. Yes, I met some great people at college, some great friends that impacted my life in many, many ways. But if I had known [then] what I know now about college, if I had known that I could've been closer to my boyfriend 5 years earlier...I wouldn't have gone to college. I feel like I went to college, I got this degree, I've got all this knowledge, I've got the hands-on experience, but I have to sit on it because I get penalized if I work. And let me tell you, if somebody would have been honest to me and said: ‘[MELISSA], the work market for people with disabilities is a bitch. If you want to go for it for social and independence reasons, go for it, but don't bust your ass in school with the hopes of being real successful because you can't be,’ I really would've appreciated it, instead of everybody saying, ‘[MELISSA] you're going to go to school, you're going to get this great job.’ Baloney. Good luck.”

Although Melissa was pessimistic about the ability of a college degree to secure her any job, others, like Katie, were more upset about the perceived failure of college faculty and mentors to advise her on how to choose a realistic career given her physical challenges:

“I was, for a while, sort of angry at the school – that no one had stopped me and said, ‘[KATIE], teaching is very physically demanding; you will need to be on your feet for eight hours a day. Can you really handle that?’ Because, as I dragged myself through the finish line in student teaching, I thought, ‘Duh. Why didn’t anybody stop me and go, ‘Wait a second. Maybe this isn’t...Maybe there’s another avenue that you can take, that would be close to this, but not exactly this’?”

However, there was pessimism even among those who had carefully selected a career that they felt would be accommodating to the particular disability-related challenges they faced. Mitch chose journalism because he felt that, as a person with cerebral palsy, he could perform the duties that went along with being a reporter. Despite achieving a 3.7 GPA at a well-respected university and his experience working for a college newspaper, Mitch struggled to find full-time work after graduation. Mitch questioned the value of a college education if it did not lead directly to work:

“Well, [if I can’t get a job] why did [I] go to school then? You know, if [I] can’t get a job, there’s no point to even go to, you know, graduate from college... Yeah, I mean [I] paid for a college degree, you know? I mean, how can [I] pay it back if [I] can’t get a good job?”

Among older college graduates who did find full-time professional positions, the most common path to finding employment was capitalizing on personal connections. Even though they experienced relative success compared to their younger counterparts, the jobs they secured through personal ties tended to be tenuous and many led careers capped by early retirement. When he completed graduate school, Stephen, age 60, taught at a local college as an adjunct. After failing to secure a full-time academic position (a failure he felt was strongly influenced by employer discrimination on the basis of his

disability), he obtained a government position when a political candidate he campaigned for won local political office. Stephen remained in his position for more than ten years, but after experiencing difficulties with his immediate supervisor, he obtained a political appointment when one of his former students obtained a position in the state government. He remained in his position for several years, but when it became clear that his job would disappear because his former student had won a national political position and in light of physical challenges that worsened with age, Stephen opted for retirement at age 50 rather than finding another position.

Margaret, age 55, unsuccessfully searched for work after obtaining her degree in special education, but eventually managed to secure a position in the billing department of the factory her father managed. After her father became ill and passed away, Margaret was laid off a year later. Margaret says,

“Almost a year after my father died, they were having lay-offs and they laid me off. [I] submitted a suit because they...really were firing me basically because they...felt that they had fulfilled their duty to my father and that they didn’t want to keep me...[I] lost that suit...[and although I had a few interviews after that] eventually, I just decided to not pursue work anymore.”

In the cases of Stephen and Margaret, their college educations may have facilitated entry into networks that helped them find jobs or their college educations may have acted as a type of post-hoc credentialing after they secured positions through personal contacts. As is the case in the labor market more generally, one of the most successful job search techniques is to use information and recommendations gleaned from acquaintances to obtain jobs (Granovetter 1973, 1974). What these data suggest - though this finding needs to be tested explicitly with a larger sample - is that the ability of people with disabilities to *stay* in a job also depends on whether they have a respected person affiliated with the

workplace to vouch for them and make sure they are treated fairly. Either way, it is clear that the attainment of a college degree by itself was insufficient to find employment.

Stephen articulates the employment paradox faced by many college graduates with disabilities when he says:

“I think there’s a paradox, there’s a fundamental paradox - one of many - when you deal with disabilities. And that is that the rehabilitation system in the United States is very good historically at turning out- in supporting and educating and preparing people for work - high school and college graduates - preparing them for work and then finding that they can’t get jobs. That’s the real paradox: That the American taxpayer underwrites the education and the training of generation after generation of people with the widest possible array of disabilities. And then says to them the greatest good is to go and work in competitive employment. And a great many of people...find themselves highly motivated, well-educated, enthusiastic and ready to work and ready to do their part. And then finding themselves...the victims of overt discrimination on the part of small businesses who say you’re cutting into my bottom profit margin and by the way, my customers are not going to like that. They’re not going to like to see a person in a wheelchair or they’re not going to like to see somebody with a visual impairment or somebody who’s deaf. They don’t know how to deal with that. You’re going to scare people away.”

ECONOMIC SURVIVAL AND THE CONSEQUENCES OF JOBLESSNESS

Many in-depth interviewees and key informants discussed the work disincentives inherent in the system of disability cash and in-kind benefits. Once recipients enter the system, it is quite difficult – for a variety of reasons – to leave. This partial safety net of benefits includes cash transfers and - many would say - more importantly, in-kind services like personal attendant care, healthcare, payments for durable medical equipment like wheelchairs, and subsidized housing. Entry into these programs is governed by an anachronistic and paternalistic set of rules mandating that applicants prove they cannot work. After applicants make it through the disability determination process, which may take months or even years, they are then encouraged by the self-same programs to return

to work - an effort that, unsurprisingly, often fails. None of these findings are new. Findings such as these have been discussed at length in the economic and vocational rehabilitation literatures.

What is new is the fact that the dramatic growth in Supplemental Security Income (SSI) among children with disabilities since 1990 has lowered the age at which many people with disabilities enter the system of benefits. SSI is a means-tested program that provides a very modest monthly stipend – as Stapleton and colleagues (2006) point out, the maximum federal SSI cash benefit is only 75% of the federal poverty line for an individual. However, SSI also grants automatic entry into Medicaid, the foremost way of paying for durable medical equipment and personal attendant care. This phenomenon has its own impacts on the employment trajectories of more recent cohorts of people with disabilities which have not been fully considered.

Interviews with long-time disability professionals suggest that some believe that SSI has, in fact, contributed to a decline in employment participation among young people with disabilities. For example, one high-level state employee working on disability issues, and who himself had a disability, felt that the same cycle of dependency previously observed among older people with disabilities was simply being replayed, only at younger ages. He also underscored the impact that families had on the choices made by youth with disabilities about whether or not to work in two ways. First, parents may discourage their children from working because of the fear that working might jeopardize their child's benefits and, in turn, their long-term economic security and health. Second, parents discourage their children from working because they come to rely on their child's SSI check as an important source of income for the household. He says:

“You also find, especially for folks who have been receiving Social Security benefits as a child, there’s a great deal of family pressure not to work. Because you’re also getting health care services through a system that essentially says you can only get it if you don’t work. Now, there are a number of caveats to that, but unfortunately the message that tends to be remembered by parents is only: ‘If my kid goes to work, he dies,’ [laughs] because literally, we, as a society, withdraw healthcare. Or, ‘He loses his support, she loses her support check,’ or even the parents say, ‘I lose their support check.’

“I was at a seminar a couple of years ago...listening to some parents and adults with disabilities, listening to somebody from the Social Security system talking about the different benefits and what blew [me] away was that a parent asked about her 18 year old son who had a learning disability and [how] his check had stopped coming to her. How could she get *his* check re-routed to *her*? Now, the Social Security person told her exactly how to do it...It was [about] how the parent could get the check to maintain the parent’s lifestyle. There was no, in fact, discussion about using the check to support the 18-year old. The parent was upset because the check was now going to her 18-year old.

“So, for some families, you know, [SSI is] income into the household. For the larger percentage of families, it’s the fear of loss of support services. And even for folks who, as adults, get into the Social Security disability system and then have to wait 24 months to get Medicare, they struggle so much to prove they can’t work, and then we have these not-very-well-understood...avenues in which you can work and still receive Medicaid benefits...The fear of loss of health care on the part of the potential employee and the fear of ratcheting up insurance costs on the part of the potential employer...create real barriers. And all of those barriers are really more psychological than potentially real.”

The rationales for why she could not work full-time presented by Melissa in a previous section are echoed by Shelby, when she discusses why she turned down a job offer:

“[After receiving the job offer,] I actually went online to see what the salary [for the offered job] was...I’m like, ‘Ok, are they going to be worth my time?’ and ‘Is this going to give me more money than I have now or is it just going to even it out?’ Because once you take a job, you lose your SSI. So, it was like \$11 or \$12 [at] twenty hours a week. I called [the employer] back and I basically said, ‘Thank you, but no thanks.’”

Because I conducted these interviews at a single point in time, it was difficult to get a sense about whether dependency on Social Security benefits has changed over time.

However, the views expressed by the informants I spoke with support the statistical evidence presented in the last chapter about the importance of cash transfer benefits to the overall household economy for working-age people with disabilities. With the economic survival of the household in mind, the difficulties of purchasing personal attendant care

and durable medical equipment on the private market, and the frustrations experienced by many in the job search, it is likely that SSI – while providing a stipend that can be quite small – is nonetheless an attractive and stable source of income and healthcare benefits.

One possible consequence of joblessness: The marriage penalty

As a routine part of my interviews, I asked respondents whether they lived with anyone else. At this point in my interview with Melissa, she requested that I turn off the tape recorder. She proceeded to explain to me that while, formally, she lived alone, in reality she lived with her fiancé. She also explained that, although she referred to her romantic partner as her fiancé, they had no plans to get legally married. When I asked her why, she explained that, if she and her fiancé – a fellow Social Security disability recipient – were to marry, they would lose half of their benefits and jeopardize their personal attendant care services. Mitch described a similar situation as Melissa's; he had a fiancée that he did not plan to legally marry until they both had jobs that paid well enough for them to transition off of disability benefits. When I asked how long he thought that would take, he replied that he didn't ever think it would happen because he believed they simply could not get jobs that would pay enough.

Other respondents I spoke with decided to get legally married and, as a consequence, some experienced financial penalties incurred by Social Security. Richard, age 64 was unaware of how his marriage to his wife, who worked as a nurse and does not have disabilities, would affect his DI benefit. Although earnings and changes in disability or marital status are technically monitored by the Social Security Administration, the SSA's large bureaucracy frequently makes it slow to alter benefit payments to reflect these changes. In these cases, SSA disability benefit recipients receive what is called an

overpayment - a benefit payment that is in excess of what recipients are programmatically entitled to - and, once the mistake is detected by SSA, recipients are expected to repay the overpayment plus pay any additional fines or taxes that may be incurred. Sometimes, the amount of time between the time that the overpayment occurs and the time it is detected can span years. For example, Richard was shocked to receive a notice that he owed Social Security \$10,000 eight years after he got married.

“It wasn’t until after we got married – and we got married in ’86 and I think in ’92 they notified us that I owed them, [the] IRS [did], I owed them 10,000 dollars back pay. I mean, why should I have to pay them back pay when it was their mistake? I never knew about the law. But nonetheless, not only did I have to owe them back pay on our earned income, but I had to, for those six years that I was working and receiving Social Security, I had to pay the 80% [tax] on my Social Security plus whatever they tabulated per year. It was compounded with penalties and interest. So it took me like 10 years to pay them all back. [While] I was paying for ’87, ’88, ’89, ’90, ’91, ’92, I was building up penalties and interest for ’93, ’93, [and] ’94....I said, ‘Well, can’t you just waive the penalties and interest?’ They wouldn’t do it. They wouldn’t do it.”

Overpayments are a widespread feature of the SSA benefit system. They have become such a problem that the Social Security Administration provides grants to local disability law offices to offer pro bono services to SSA beneficiaries to sort through the legal paperwork associated with overpayment proceedings.

Although some respondents reported experiencing the marriage penalty, not all did. However, it proved enough of a disincentive to prevent some from getting legally married.

SUMMARY

Interviews with people with disabilities and key informants suggest plausible mechanisms for the relationships presented in previous chapters. The statistical analyses presented in earlier chapters suggest that neither common individual-level predictors of

labor force participation nor occupational sorting are sufficient to explain the entirety of the gaps in employment or wages between workers with and without disabilities.

Employer discrimination has been posited as a possible mechanism contributing to the inability of other factors to entirely explain away disability employment and wage gaps. Through the narratives of people with disabilities and key informants working with the disability community, it is evident that the experience of discrimination at the hands of prospective and current employers is widespread. Furthermore, the interview data illuminate the ways in which employers can continue to discriminate in the face of civil rights laws expressly prohibiting employers from doing so.

Although most of the hypotheses set out in the literature review chapter (chapter two) were tested in earlier chapters, one (hypothesis 1.6) is addressed by the interview data discussed in this chapter. That hypothesis (refer to Table 1.7) stated that discrimination against people with disabilities would be more likely to take the form of statistical discrimination – that is, discrimination based on making “rule of thumb” judgments or judgments based on statistical averages about a whole group of people – rather than the form of prejudice-based discrimination. Employers frequently sought to disqualify job applicants with disabilities by emphasizing relatively minor job tasks or by amending the tasks associated with the open position to include tasks that applicants could not perform without accommodations. Employers also resisted proposed reasonable accommodations, even when they admitted that applicants were otherwise qualified for the position. Although more investigation of the forms and degree of employer discrimination against people with disabilities, the available evidence suggests that

employer discrimination is more likely to take the form of statistical, rather than prejudice-based discrimination.

Table 7.1 Summary of Hypotheses Tested

Hypothesis	Supported
1.6 Discrimination against people with disabilities during the hiring process will take the form of statistical, rather than prejudice-based, discrimination.	Yes

The interview data also shed light on mechanisms that serve to systematically sort people with disabilities into certain jobs over others. Some individuals with disabilities, for example, sought part-time work opportunities because they felt they were not physically capable of working full-time or because they did not want to jeopardize their Social Security benefits and healthcare. Other occupational sorting mechanisms were also apparent, including the sorting of people with disabilities into positions that served the disability community or that dealt with disability as a subject matter; and the tendency of people with disabilities to get sorted into food service, custodial, clerical, and human services jobs.

Additionally, the interview data suggests that some young people with disabilities are expected to attend college and subject to expectations that they will search for employment after graduation. Based on this sample, it is difficult to tell how widespread this expectation is for youth with disabilities, but the increasing share attending college suggests that the number of youth subject to this expectation may very well be growing. However, the experience of an extremely difficult job search and eventual disengagement with the labor market appeared to be common across college graduates with disabilities. Those who were successful in obtaining employment appeared only to be successful because they were able to capitalize on personal connections. Those without any such

personal connections were generally unsuccessful in finding suitable employment opportunities.

Last, SSI expansions appear to have two effects on the employment decisions of young people with disabilities. First, income from SSI appears to be an important contribution to the household economy for some people with disabilities. This finding is consistent with descriptive findings presented in the previous chapter on the contributions of cash transfer income to the overall household economy of jobless adults with disabilities. Second, SSI receipt appears to alter the decision-making calculus to one in which individuals with disabilities search for job opportunities in which they will be better off, overall, with a job. However, because of the tremendous costs of personal attendant care and durable medical equipment - expenses that are covered by Medicaid but which remain untouched by private insurers - it is rare for many to find an employment opportunity that can fully replace SSI and Medicaid benefits.

CHAPTER 8: DISCUSSION AND CONCLUSION

This dissertation project was motivated by how the puzzling drop in employment rates of people with disabilities revealed that factors resistant to social change help maintain widespread joblessness and economic marginalization among people with disabilities. Based on the existing literatures on disability and labor market inequality, I posed three main research questions to guide this dissertation project and, where appropriate, I posited hypotheses about the relationship between key factors of interest and economic outcomes. The three main questions guiding this project were: First, what are the forms of labor market inequality experienced by people with disabilities and what are the mechanisms that bring it about? Second, what is the net effect of rapid social change on employment for people with disabilities? Finally, how does the large number of jobless adults with disabilities achieve economic survival?

SUMMARY OF KEY FINDINGS

What are the forms of labor market inequality and the mechanisms that bring it about?

What characteristics predict employment for people with disabilities and are they the same as the characteristics that predict employment for people without disabilities? Results from binary logistic regressions provide support for the overarching hypothesis that established predictors of labor force participation hold different relationships with the likelihood of employment for people with disabilities than they do for people without

disabilities. In most cases, I found that these relationships were simply intensified, so that some characteristics that are positively related to employment for the general population are even more so for people with disabilities and others that are negatively related to employment have even steeper penalties for people with disabilities. In particular, the effect of a college education on the probability of employment was greater for people with disabilities than for people without disabilities, although a college education was still not enough to mitigate the large negative impact of disability on the chances of employment. In fact, net of other characteristics, college-educated adults with disabilities had the same likelihood of being employed as high school-educated adults without disabilities.

Three additional findings are also worth mentioning. First, the disadvantage that women with disabilities experience in employment relative to men with disabilities is smaller than that experienced by women without disabilities relative to their male counterparts. Second, the likelihood of employment is much lower among blacks with disabilities than among blacks without disabilities. Third, the impact of household factors on employment for people with disabilities has not been considered in previous studies of disability and employment. Whereas the number of dependent children has a negative relationship with employment for the general population, for people with disabilities, it has no effect on employment. The positive effect of earned income from other household members on employment chances is doubled for people with disabilities. These findings suggest that people with disabilities who have more financial resources at home are also more likely to work, but that they are neither negatively nor positively affected by the presence of children.

Employer discrimination against people with disabilities is posited as one of the major mechanisms that depress employment rates among people with disabilities. How does employer discrimination against people with disabilities persist in the face of civil rights protections that prohibit employers from doing so? The experiences of discrimination related by informants suggest that employer discrimination is indeed widespread and that it is shaped by wider economic and political forces. Employers appear to be primarily engaged in statistical discrimination, in that they raise concerns about productivity and liability as their primary objections to the employment of job applicants with disabilities. Although the data I use here cannot directly address this issue, it appears that an economic climate in which many employers are reducing staff and expecting remaining staff to do more work with fewer resources contributes to the rise of statistical discrimination against workers with disabilities in particular.

Employers also demonstrate an awareness of equal employment opportunity law. The ADA requires employers to provide otherwise qualified individuals with disabilities to be provided with the reasonable accommodations they need to perform their jobs. Rather than raise overt objections to hiring someone with a disability, interviewers frequently discriminate by attempting to prove that applicants with disabilities are not actually qualified for the advertised position. They do so by subjecting job applicants with disabilities to a higher level of scrutiny than other applicants, emphasizing trivial duties for applicants with disabilities but not for other applicants, or by reformulating the job description mid-interview in order to make a case that applicants with disabilities are not qualified.

Although a great deal of attention is paid to whether people with disabilities work or not, there are still a fair number of people with disabilities who do work. However, the current evidence indicates that people with disabilities face disparities in pay when compared to their peers without disabilities. The sociological literature on wage inequality demonstrates that differential sorting into lower-paid occupations explains a great deal of the wage gap between men and women and between white and black workers. It is plausible that occupational sorting also plays a role in the observed disability wage gap. To what extent does occupational sorting explain the gap in wages between full-time workers with and without disabilities? Do other features of the occupational structure help explain disability wage gaps? And, if occupational sorting does indeed exist, what are the mechanisms that sort people with disabilities into specific jobs?

How much of the observed difference in wages between workers with and without disabilities is due to occupational sorting? The unadjusted estimate of the disability wage gap among full-time workers is \$33 per week, or \$1,724 per year. Accounting for sociodemographic characteristics (age, sex, race/ethnicity, and education) accounts for 5% of the variance in the disability wage gap and accounting for household characteristics accounts for an additional 7% of the wage gap. After controlling for personal and household characteristics, accounting for region and metro residence explains an additional 1% of the variance. Individual, household, and residential factors account for a total 13% of the disability wage gap, yielding an estimated wage gap of \$28.61 per week, or \$1,488 per year.

Using multilevel models, I considered the extent to which occupational sorting explained the observed wage gap between full-time workers with and without disabilities. Between-occupational differences account for an additional 23% of the variance, reducing the estimated wage gap to \$20 per week, or \$1,040 per year. If we also consider the extent to which there are disability wage differences between those working within the same occupation, we can explain an additional 4% of the variance. Thus, after adjusting for the effects of differential occupational sorting and occupational rewards, we can explain 43% of the disability wage gap, most of which is due to occupational sorting rather than personal characteristics. Fifty seven percent of the disability wage gap remains unexplained. Observed differences in average earnings appear to be unaffected by whether occupations are low or high-status occupations. To place this finding in context, compare it to Grodsky and Pager's (2001) finding that individual, household, regional characteristics explains 55-60% of the variation in black-white wage differentials, and controlling for the concentration of black workers in low-paid occupations explains an additional 20% of the variation, for a total 75-80% of the variance being explained.

What are the mechanisms which serve to sort people with disabilities into systematically different occupations? Based on in-depth interviews with people with disabilities, I was able to identify four ways in which people with disabilities are systematically sorted into specific occupations. Some people with disabilities reported choosing part-time over full-time work because they felt that a full-time position would be too fatiguing. Others chose part-time work in order to maintain their Social Security disability benefits by keeping their earnings low.

Other sorting mechanisms, however, systematically shifted people with disabilities into particular types of jobs regardless of whether they worked full- or part-time. One of these mechanisms served to move people with disabilities into jobs with organizations primarily serving people with disabilities or niche jobs serving people with disabilities or working on disability issues within more general organizations. Some people willingly worked in these positions, describing their work for people with disabilities as a calling to serve the greater cause of people with disabilities. Others faced considerable discrimination when they tried to obtain mainstream work and found themselves only able to work on disability-related issues because they could find no other work.

Even after obtaining a job, some people with disabilities were shifted into work tasks involving what one informant called “the 3 Fs” – “food, filth, and filing.” Thus, even when hired to perform other duties, professionals with disabilities often found themselves shuttled into clerical tasks that were generally performed in isolation. Jobs dealing with food and filth were not typically assigned to highly-educated people with disabilities, and I was unable to interview any informants with cognitive disabilities. However, key informants indicated that many people with cognitive disabilities worked in food-service, custodial, and paper shredding jobs.

What is the net effect of rapid social change on employment for people with disabilities?

Do cohorts of people with disabilities born more recently – and who have more exposure to mainstream education and civil rights protections - have better luck in securing employment? Forty-year trends do not reveal any dramatic declines in disability employment rate, but do indicate that people with disabilities have not experienced the

same employment expansions as working-age people without disabilities. Comparing successive cohorts, however, demonstrates growth in the unadjusted (except for age) employment rates across cohorts of people with disabilities and suggests that the gap in disability rates may have, in fact, narrowed among younger birth cohorts. Furthermore, trends in employment reveal tremendous growth in high school graduation and attainment of at least some college education for both people with and without disabilities, although gains are not as large for people with disabilities.

After controlling for individual characteristics, however, two general trends become apparent. First, Americans, generally speaking experienced expansions in employment across successive birth cohorts. That is to say that a larger share of people born towards the end of the 20th century worked compared to people born earlier in the 20th century. Second, this trend is reversed for people with disabilities. A smaller share of people with disabilities born towards the end of the 20th century worked compared to people with disabilities born earlier in the 20th century. Simulations suggest that employment rates for those born towards the end of the 20th century – the very same people with the greatest exposure to mainstream education and civil rights protections – will be increasingly less likely to work

Two subgroup findings from models using cross-sectional data are replayed in these longitudinal data. First, the “female penalty” for people with disabilities is reduced relative to the penalty faced by women without disabilities when compared to their male peers without disabilities. Second, the “race penalty” associated with being black is amplified for blacks with disabilities, in that the disadvantage they face relative to their white counterparts with disabilities is significantly more severe than the race penalty

observed for the general sample. In fact, after controlling for interactions between predictors and disability, the “race penalty” for blacks without disabilities in employment disappeared for adults without disabilities, while it remained and worsened for blacks with disabilities.

How do people with disabilities understand the seeming inability of a college degree to overcome barriers to employment? College-educated people with disabilities who were interviewed for this study recounted how, like other family members and fellow students, they were expected to go to college and were assured that, if they continued to do well in school, they would have no problems securing a good job. However, unable to obtain a well-paying job in their field, many either settled for a job that was less than what they expected or dropped out of the labor market altogether. Although such ill-luck stories are familiar for other workers searching for jobs in a tough economy, college-educated job seekers with disabilities were frequently looking for work in a booming economy and met with rejections that were clearly related to their disabilities without consideration of their objective skills and talent. Based on these experiences, many of the college graduates with disabilities I spoke with became disillusioned with what they considered to be the false promises of a college education and some expressed bitter disappointment and resentment towards those they felt had pushed them, ill-advisedly, to attend college at all.

How do jobless adults with disabilities achieve economic survival?

What are the sources and amounts of income for jobless adults with disabilities? Nearly 80% of jobless adults with disabilities receive unearned income, compared to 60% of jobless adults without disabilities and 61% of employed adults with disabilities.

Jobless adults with disabilities realize a larger amount of personal income, on average, than their peers without disabilities; however, they also live in households that are substantially poorer and subject to much higher levels of material hardship across all measures considered here (food security, bill-paying hardship, accessing needed health care, and housing adequacy).

It is not clear that employed adults with disabilities are consistently better off than their jobless counterparts. Employed adults with disabilities receive a much larger amount of total income (from both earned and unearned sources) relative to their jobless counterparts, and they are less likely to experience food insecurity and bill-paying hardships. However, they also reside in relatively poor households and are equally as likely as their jobless counterparts to experience medical and housing hardships.

DISCUSSION OF FINDINGS

The central finding of this dissertation is that a cast of institutional actors shape the labor market experiences of people with disabilities. In particular, institutional actors help determine 1) the extent and experience of joblessness and 2) the contours and magnitude of labor market inequality encountered by workers with disabilities. The phenomenon of widespread joblessness among people with disabilities is partially constituted and exacerbated by rules and practices of the welfare state bureaucracy that helps many people with disabilities live independently in the community (what Erkulwater (2006) calls the new asylum) and by discriminatory practices on the part of employers. Practices by these institutional actors also affect the experiences of employed people with disabilities. The eligibility rules imposed upon participants in the new asylum

disproportionately sort workers with disabilities into part-time work arrangements as participants try to maintain the supports they need to live independently. Employers contribute to the occupational sorting of workers with disabilities by steering them away from certain jobs and towards other, generally lower-paying, jobs.

The experience of widespread joblessness is also shaped by expansions in access to mainstream schooling and by the vocational rehabilitation and disability non-profit industry. Expanded access to mainstream schooling for people with disabilities has led to the growth of college education among people with disabilities. It has also exposed a broader swath of people with disabilities to mainstream educational and career aspirations, aspirations that may not be matched by contemporary labor market realities.

My interviews and fieldwork observations suggest a different role for the disability rehabilitation and non-profit industry than the more pessimistic one presented by Albrecht (1992) and Scott (1969). Vocational rehabilitation and disability non-profit organizations provide job training resources, attempt to persuade the employer community to hire workers with disabilities through outreach and training activities, and are purveyors of a pro-work ideology that socializes people with disabilities to be willing and eager workers. Some disability non-profits, most notably Independent Living Centers, are products of the disability rights movement, disseminating empowerment-based discourses about disability and independence that advocate a view of disability in contrast to stigmatizing portraits of disability related to helplessness and dependency. Despite the efforts of schools and vocational rehabilitation agencies in cultivating the value of work and economic self-sufficiency among people with disabilities, the skills, training, and ideology they provide to their consumers nevertheless appear unable to

overcome the substantial barriers to full work participation and true economic self-sufficiency posed by complicated welfare state rules and pervasive employer discrimination.

LIMITATIONS

Although the research design adopted by this dissertation project tried to make the best use of available data, it is limited in several important ways. First, although the multilevel analyses incorporating three-digit occupation convincingly demonstrate that occupational sorting plays a powerful role in explaining disability wage inequality for full-time workers, they still leave room for a fuller understanding of how people with disabilities are sorted into particular jobs and the effects that sorting has on earnings inequality. In an exploration of how detailed occupations might differ systematically between workers with and without disabilities (not shown), no clear patterns emerged. However, I have not yet examined whether there is systematic sorting of workers with disabilities into occupations associated with particular job tasks or other characteristics.

The findings of Robert and Harlan's (2006) study indicate that segregation by job task or other, more localized features of the workplace characterize the work experiences of people with disabilities. They found that, unlike workplace segregation by sex or race, people with disabilities occupy the same job titles as their peers without disabilities but are physically segregated from other workers or are separated by on-site administrative classifications that are not captured by job title alone. A further weakness of the occupational analyses presented in this dissertation is that they focus solely on full-time workers. Although this was a choice informed by the concerns of previous analysts about

accounting for lower productivity, it nevertheless limits the picture these analyses are able to provide of wage inequality experienced by workers with disabilities.

A second limitation of the methodological approach adopted by this dissertation is its measurement of social change. Social change is measured indirectly, through the inclusion of birth cohort dummies in regression analyses and a single indicator variable for post-1996 survey years. Although fixed effects models with single year dummies to capture change over time are feasible, it was not possible, with a single-level binary logistic regression model, to simultaneously include dummies for birth cohort and dummies for survey year without introducing substantial multicollinearity.

A third limitation in the design of this study has to do with the recruitment of in-depth interview participants. Informants were primarily recruited through snowballing, which limits the generalizability of these findings to the overall population of people with disabilities. However, the chief purpose of the in-depth interviews was not necessarily generalizability as much as it was to gain insight into mechanisms, experiences, and other information that could not be gleaned from existing quantitative data sources. Furthermore, key informant interviews with state employees and leaders of disability organizations, as well as observations I made at workshops and the additional textual and audiovisual materials I collected helped to me to cross-check the validity of the interview data.

FUTURE RESEARCH DIRECTIONS

The discussion of methodological limitations above hints at possible avenues for future research. Among these are extending the existing analyses of the occupational

determinants of disability earnings inequality. Specifically, these analyses could be extended to incorporate measures of job tasks that are associated with specific occupations made possible by publicly accessible databases such as the one available through the Department of Labor's O*NET initiative. The O*NET database provides continuously updated information on the credentials and skills required of occupational incumbents, workplace conditions, and job tasks that occupational incumbents are required to perform. Consideration of detailed occupational information can allow for the testing of more refined hypotheses about disability job segregation and wage inequality.

It is also possible to extend the analyses of social change by making use of newly popularized statistical methods to more fully exploit existing secondary quantitative data sources. For example, a complementary approach to the one taken here is a full-fledged age-period-cohort analysis using cross-classified random effects (CCREM) models. Yang Yang has pioneered the use of these models with repeated cross-sectional data, similar to those used in this dissertation, applying them to a variety of research questions that can be fruitfully addressed by separating the effects of age from those of period and cohort.

Last, more direct information about employer practices is needed. For example, questions remain about whether certain employers are less likely to discriminate and under what circumstances employers are less likely to discriminate against job applicants and employees with disabilities. Furthermore, more information is needed about how integrated youth with disabilities are in mainstream education and about what can be done to improve their chances of obtaining jobs that better match their training and aspirations.

CONCLUSION

What the findings of this dissertation make clear is that people with disabilities face complex barriers to full participation in the labor market. While there are certainly people with disabilities who voluntarily withdraw from the workforce and do not wish to work, there are others who are stymied by employer discrimination and difficult choices posed by restrictive welfare state rules. Furthermore, it is not always clear that, when people with disabilities work, they are necessarily better off than jobless people with disabilities.

Continuing investments in the education and training of people with disabilities are a critical piece of the low employment puzzle. However, without addressing the larger structural barriers to employment of people with disabilities, the problems of widespread joblessness, labor market inequality, and substantial material hardship - even among those people with disabilities are employed - will continue or perhaps even worsen. One of the major policy remedies used to address persistently low employment has been anti-discrimination laws, such as the Americans with Disabilities Act. In contrast to the positive employment effects of civil rights law for women and minorities, the employment protection provisions of the ADA are generally regarded to be a failure. However, the enforcement of equal employment opportunity law for workers with disabilities has not been as rigorous as it has for minorities and women. For example, the EEOC collects survey data from employers about the gender and racial makeup of their workforce through an annual survey authorized by Title IIV of the 1964 Civil Rights Act, but they do not collect similar data about the share of employees with disabilities (EEOC 2006). The EEOC also engages in matched-pair testing (where teams of trained individuals, one black and one white, interview with prospective employers) to identify

and track racial discrimination in hiring (EEOC n.d.). Despite the evidence of widespread employer discrimination against people with disabilities, such efforts are not currently employed for detecting disability discrimination.

It is also worth mentioning the 2010 Affordable Care Act, aimed at expanding health care coverage to everyone. At the time of this writing, it is only possible to speculate about the possible impacts of the Affordable Care Act on people with disabilities. On the one hand, it is plausible that health care reforms will take away the worries that many people with disabilities have about losing needed health care benefits if they work. However, many people also rely on public disability benefits to provide them with access to other in-kind benefits and services outside of health care, such as personal attendant care or subsidized housing. There do appear to be some provisions under the new law to address these concerns as well. For example, an initiative slated for 2010 called the Community Living Assistance Services and Supports (CLASS) Program provides a cash allowance to people with disabilities to purchase care and other supports necessary to independent living (HealthCare.gov n.d.). However, whether access to the cash assistance provided through the CLASS program will be means-tested and/or will be adequate to meet the needs of people with disabilities remains to be seen.

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APPENDIX

Table A.1 Occupational Cross-walk for the 1996, 2001, and 2004 Surveys of Income and Program Participation

SIPP Code	SOC Code	Description	Notes
10	11-1011	Chief executives	
20	11-1021	General and operations managers	Collapse with "Administrators, protective services"
40	11-2011	Advertising and promotions managers	Collapse with "Administrators and officials, public administration"
50	11-2020	Marketing and sales managers	
55	11-2011		
60	11-2031	Public relations managers	
100	11-3011	Administrative services managers	
110	11-3021	Computer and information systems managers	Created from 40 and 50 to standardize across years. Assigned Advertising and Promotions code.
120	11-3031	Financial managers	Found code on o-net; was not in 2004 SIPP.
130	11-3040	Human resources managers	
140	11-3051	Industrial production managers	Collapse categories 310, 340 to standardize. Assign "Food service managers" code.
150	11-3061	Purchasing managers	
160	11-3071	Transportation, storage, and distribution managers	
200	11-9011	Farm, ranch, and other agricultural managers	
210	11-9012	Farmers and ranchers	

220	11-9021	Construction managers	
230	11-9030	Education administrators	
300	11-9041	Engineering managers	
310	11-9051	Food service managers	
320	11-9061	Funeral directors	
330	11-9071	Gaming managers	
340	11-9081	Lodging managers	
345	11-9051	Managers, food service and lodging	
350	11-9111	Medical and health services managers	
360	11-9121	Natural sciences managers	
410	11-9141	Property, real estate, and community association managers	
420	11-9151	Social and community service managers	Assigned code for "Compliance officers, except Agriculture, Construction, Health, Safety, and Transportation" from o-net. Not exactly right, but I couldn't find anything that fit better. (collapse 3750 and 9410).
430	11-9199	Managers, all other	
500	13-1011	Agents and business managers of artists, performers, and athletes	Collapse categories 1305 and 1440 to create "Architect", and assign code for "Architects, except for naval".
510	13-1021	Purchasing agents and buyers, farm products	
520	13-1022	Wholesale and retail buyers, except farm products	
530	13-1023	Purchasing agents, except wholesale, retail, and farm products	
540	13-1030	Claims adjusters, appraisers, examiners, and investigators	

560	13-1041	Compliance officers, except agriculture, construction, health and safety, and transport	
600	13-1051	Cost estimators	
620	13-1070	Human resources, training, and labor relations specialists	
700	13-1081	Logisticians	
710	13-1111	Management analysts	
720	13-1121	Meeting and convention planners	
730	13-11XX	Other business operations specialists	
800	13-2011	Accountants and auditors	
810	13-2021	Appraisers and assessors of real estate	
820	13-2031	Budget analysts	
830	13-2041	Credit analysts	
840	13-2051	Financial analysts	
850	13-2052	Personal financial advisors	
860	13-2053	Insurance underwriters	
900	13-2061	Financial examiners	
910	13-2070	Loan counselors and officers	
930	13-2081	Tax examiners, collectors, and revenue agents	
940	13-2082	Tax preparers	
950	13-2099	Financial specialists, all other	
1000	15-10XX	Computer scientists and systems analysts	
1010	15-1021	Computer programmers	
1020	15-1030	Computer software engineers	
1040	15-1041	Computer support specialists	
1060	15-1061	Database administrators	
1100	15-1071	Network and computer systems administrators	
1110	15-1081	Network systems and data communications analysts	
1200	15-2011	Actuaries	
1210	15-2021	Mathematicians	
1220	15-2031	Operations research analysts	
1230	15-2041	Statisticians	

1240	15-2090	Miscellaneous mathematical science occupations	
1300	17-1010	Architects, except naval	
1305	17-1010	Architects	
1310	17-1020	Surveyors, cartographers, and photogrammetrists	
1320	17-2011	Aerospace engineers	
1330	17-2021	Agricultural engineers	
1340	17-2031	Biomedical engineers	
1350	17-2041	Chemical engineers	
1360	17-2051	Civil engineers	
1400	17-2061	Computer hardware engineers	
1410	17-2070	Electrical and electronic engineers	
1420	17-2081	Environmental engineers	
1430	17-2110	Industrial engineers, including health and safety	
1440	17-2121	Marine engineers and naval architects	
1450	17-2131	Materials engineers	
1460	17-2141	Mechanical engineers	
1500	17-2151	Mining and geological engineers, including mining safety engineers	
1510	17-2161	Nuclear engineers	
1520	17-2171	Petroleum engineers	
1530	17-2199	Engineers, all other	
1540	17-3010	Drafters	
1550	17-3020	Engineering technicians, except drafters	
1560	17-3031	Surveying and mapping technicians	
1600	19-1010	Agricultural and food scientists	
1610	19-1020	Biological scientists	
1640	19-1030	Conservation scientists and foresters	
1650	19-1040	Medical scientists	
1700	19-2010	Astronomers and physicists	

1710	19-2021	Atmospheric and space scientists	
1720	19-2030	Chemists and materials scientists	
1740	19-2040	Environmental scientists and geoscientists	
1760	19-2099	Physical scientists, all other	
1800	19-3011	Economists	
1810	19-3020	Market and survey researchers	
1820	19-3030	Psychologists	
1830	19-3041	Sociologists	
1840	19-3051	Urban and regional planners	
1860	19-3090	Miscellaneous social scientists and related workers	
1900	19-4011	Agricultural and food science technicians	
1910	19-4021	Biological technicians	
1920	19-4031	Chemical technicians	
1930	19-4041	Geological and petroleum technicians	
1940	19-4051	Nuclear technicians	
1960	19-40XX	Other life, physical, and social science technicians	
2000	21-1010	Counselors	
2010	21-1020	Social workers	
2020	21-1090	Miscellaneous community and social service specialists	
2040	21-2011	Clergy	
2050	21-2021	Directors, religious activities and education	
2060	21-2099	Religious workers, all other	
2100	23-1011	Lawyers	
2140	23-2011	Paralegals and legal assistants	
2150	23-2090	Miscellaneous legal support workers	
2200	25-1000	Postsecondary teachers	
2300	25-2010	Preschool and kindergarten teachers	
2310	25-2020	Elementary and middle school teachers	

2320	25-2030	Secondary school teachers	
2330	25-2040	Special education teachers	
2340	25-3000	Other teachers and instructors	
2400	25-4010	Archivists, curators, and museum technicians	
2430	25-4021	Librarians	
2440	25-4031	Library technicians	
2540	25-9041	Teacher assistants	Collapse 2700 and 2710 to create "Actors, producers, and directors" for standardization. Assign Actors o-net code.
2550	25-90XX	Other education, training, and library workers	
2600	27-1010	Artists and related workers	
2630	27-1020	Designers	
2700	27-2011	Actors	
2710	27-2012	Producers and directors	Collapse categories 2810 and 2830 to create "editors and reporters" for standardization. Assign o-net code for reporters.
2705	27-2011	Actors, producers, and directors	
2720	27-2020	Athletes, coaches, umpires, and related workers	
2740	27-2030	Dancers and choreographers	
2750	27-2040	Musicians, singers, and related workers	
2760	27-2099	Entertainers and performers, sports and related workers, all other	
2800	27-3010	Announcers	
2810	27-3020	News analysts, reporters and correspondents	
2815	27-3020	Editors and reporters	
2820	27-3031	Public relations specialists	
2830	27-3041	Editors	
2840	27-3042	Technical writers	
2850	27-3043	Writers and authors	

2860	27-3090	Miscellaneous media and communication workers	
2900	27-4010	Broadcast and sound engineering technicians and radio operators	Collapse 7050 and 7110 into "Electrical equipment installers and repairers, mechanical" for standardization. Assign "Electrical and electronics installers and repairers, transportation equipment" o-net code.
2910	27-4021	Photographers	
2920	27-4030	Television, video, and motion picture camera operators and editors	
2960	27-4099	Media and communication equipment workers, all other	
3000	29-1011	Chiropractors	
3010	29-1020	Dentists	
3030	29-1031	Dietitians and nutritionists	
3040	29-1041	Optometrists	
3050	29-1051	Pharmacists	
3060	29-1060	Physicians and surgeons	
3110	29-1071	Physician assistants	
3120	29-1081	Podiatrists	
3130	29-1111	Registered nurses	
3140	29-1121	Audiologists	
3150	29-1122	Occupational therapists	Combine 4700 and 4710 categories into "First-line supervisors/managers of sales workers" to standardize. Assign o-net code for "First-line supervisors/managers of retail sales workers."
3160	29-1123	Physical therapists	
3200	29-1124	Radiation therapists	
3210	29-1125	Recreational therapists	
3220	29-1126	Respiratory therapists	
3230	29-1127	Speech-language pathologists	
3240	29-1129	Therapists, all other	

3250	29-1131	Veterinarians	
3260	29-1199	Health diagnosing and treating practitioners, all other	Collapse 4830 (travel agents), 4840 (sales reps, services), 4940 (telemarketers), and 4960 (sales and related workers) into one category and assign the 4960 o-net code.
3300	29-2010	Clinical laboratory technologists and technicians	
3310	29-2021	Dental hygienists	
3320	29-2030	Diagnostic related technologists and technicians	
3400	29-2041	Emergency medical technicians and paramedics	
3410	29-2050	Health diagnosing and treating practitioner support technicians	
3500	29-2061	Licensed practical and licensed vocational nurses	
3510	29-2071	Medical records and health information technicians	
3520	29-2081	Opticians, dispensing	
3530	29-2090	Miscellaneous health technologists and technicians	
3540	29-9000	Other healthcare practitioners and technical occupations	
3600	31-1010	Nursing, psychiatric, and home health aides	
3610	31-2010	Occupational therapist assistants and aides	
3620	31-2020	Physical therapist assistants and aides	
3630	31-9011	Massage therapists	
3640	31-9091	Dental assistants	
3650	31-909X	Medical assistants and other healthcare support occupations	
3700	33-1011	First-line supervisors/managers of correctional officers	

3710	33-1012	First-line supervisors/managers of police and detectives	
3720	33-1021	First-line supervisors/managers of fire fighting and prevention workers	
3730	33-1099	Supervisors, protective service workers, all other	
3740	33-2011	Fire fighters	
3750	33-2020	Fire inspectors	
3755	13-1041	Inspectors and compliance officers, except construction	
3800	33-3010	Bailiffs, correctional officers, and jailers	
3820	33-3021	Detectives and criminal investigators	
3830	33-3031	Fish and game wardens	
3840	33-3041	Parking enforcement workers	
3850	33-3051	Police and sheriff's patrol officers	
3855	33-3051	Police and sheriff's patrol officers, Bailiffs, correctional officers, and jailers, and police and sherrif's patrol officers	
3860	33-3052	Transit and railroad police	
3900	33-9011	Animal control workers	
3910	33-9021	Private detectives and investigators	
3920	33-9030	Security guards and gaming surveillance officers	
3925	33-9030	Guards and police, except public service	
3940	33-9091	Crossing guards	
3950	33-909X	Lifeguards and other protective service workers	
4000	35-1011	Chefs and head cooks	
4010	35-1012	First-line supervisors/managers of food preparation and serving workers	

4020	35-2010	Cooks	
4030	35-2021	Food preparation workers	
4040	35-3011	Bartenders	
4050	35-3021	Combined food preparation and serving workers, including fast food	
4060	35-3022	Counter attendants, cafeteria, food concession, and coffee shop	
4110	35-3031	Waiters and waitresses	
4120	35-3041	Food servers, nonrestaurant	
4130	35-9011	Dining room and cafeteria attendants and bartender helpers	
4140	35-9021	Dishwashers	
4150	35-9031	Hosts and hostesses, restaurant, lounge, and coffee shop	
4160	35-9099	Food preparation and serving related workers, all other	
4200	37-1011	First-line supervisors/managers of housekeeping and janitorial workers	
4210	37-1012	First-line supervisors/managers of landscaping, lawn service, and groundskeeping workers	
4220	37-201X	Janitors and building cleaners	
4230	37-2012	Maids and housekeeping cleaners	
4240	37-2021	Pest control workers	
4250	37-3010	Grounds maintenance workers	
4300	39-1010	First-line supervisors/managers of gaming workers	
4320	39-1021	First-line supervisors/managers of personal service workers	
4340	39-2011	Animal trainers	
4350	39-2021	Nonfarm animal caretakers	

4400	39-3010	Gaming services workers	
4410	39-3021	Motion picture projectionists	
4420	39-3031	Ushers, lobby attendants, and ticket takers	
4430	39-3090	Miscellaneous entertainment attendants and related workers	
4460	39-4000	Funeral service workers	
4500	39-5011	Barbers	
4510	39-5012	Hairdressers, hairstylists, and cosmetologists	
4520	39-5090	Miscellaneous personal appearance workers	
4530	39-6010	Baggage porters, bellhops, and concierges	
4540	39-6020	Tour and travel guides	
4550	39-6030	Transportation attendants	
4600	39-9011	Child care workers	
4610	39-9021	Personal and home care aides	
4620	39-9030	Recreation and fitness workers	
4640	39-9041	Residential advisors	
4650	39-9099	Personal care and service workers, all other	
4700	41-1011	First-line supervisors/managers of retail sales workers	
4710	41-1012	First-line supervisors/managers of non-retail sales workers	
4705	41-1011	First-line supervisors/managers of sales workers	
4720	41-2010	Cashiers	
4740	41-2021	Counter and rental clerks	
4750	41-2022	Parts salespersons	
4760	41-2031	Retail salespersons	
4800	41-3011	Advertising sales agents	
4810	41-3021	Insurance sales agents	Collapse 3800, 3820, and 3850 to standardize and use o-net code from "Police and sheriff's patrol officers."

4820	41-3031	Securities, commodities, and financial services sales agents	
4830	41-3041	Travel agents	
4840	41-3099	Sales representatives, services, all other	
4850	41-4010	Sales representatives, wholesale and manufacturing	Collapse 3860, 3910 and 3920 to standardize and use o-net code from "Security guards and gaming surveillance officers."
4900	41-9010	Models, demonstrators, and product promoters	Collapse 3860, 3910 and 3920 to standardize and use o-net code from "Security guards and gaming surveillance officers."
4920	41-9020	Real estate brokers and sales agents	
4930	41-9031	Sales engineers	
4940	41-9041	Telemarketers	
4950	41-9091	Door-to-door sales workers, news and street vendors, and related workers	
4960	41-9099	Sales and related workers, all other	
4960	41-9099	Sales and related workers, all other	
5000	43-1011	First-line supervisors/managers of office and administrative support workers	
5010	43-2011	Switchboard operators, including answering service	
5020	43-2021	Telephone operators	
5030	43-2099	Communications equipment operators, all other	
5100	43-3011	Bill and account collectors	
5110	43-3021	Billing and posting clerks and machine operators	
5120	43-3031	Bookkeeping, accounting, and auditing clerks	
5130	43-3041	Gaming cage workers	

5140	43-3051	Payroll and timekeeping clerks	
5150	43-3061	Procurement clerks	
5160	43-3071	Tellers	
5200	43-4011	Brokerage clerks	
5210	43-4021	Correspondence clerks	
5220	43-4031	Court, municipal, and license clerks	
5230	43-4041	Credit authorizers, checkers, and clerks	
5240	43-4051	Customer service representatives	
5250	43-4061	Eligibility interviewers, government programs	
5260	43-4071	File Clerks	
5300	43-4081	Hotel, motel, and resort desk clerks	
5310	43-4111	Interviewers, except eligibility and loan	
5320	43-4121	Library assistants, clerical	
5330	43-4131	Loan interviewers and clerks	
5340	43-4141	New accounts clerks	
5350	43-4151	Order clerks	
5360	43-4161	Human resources assistants, except payroll and timekeeping	
5400	43-4171	Receptionists and information clerks	
5410	43-4181	Reservation and transportation ticket agents and travel clerks	
5420	43-4199	Information and record clerks, all other	
5500	43-5011	Cargo and freight agents	
5510	43-5021	Couriers and messengers	
5520	43-5030	Dispatchers	
5530	43-5041	Meter readers, utilities	
5540	43-5051	Postal service clerks	
5550	43-5052	Postal service mail carriers	

5560	43-5053	Postal service mail sorters, processors, and processing machine operators	
5600	43-5061	Production, planning, and expediting clerks	
5610	43-5071	Shipping, receiving, and traffic clerks	
5620	43-5081	Stock clerks and order fillers	
5630	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	
5700	43-6010	Secretaries and administrative assistants	
5800	43-9011	Computer operators	
5810	43-9021	Data entry keyers	
5820	43-9022	Word processors and typists	
5830	43-9031	Desktop publishers	
5840	43-9041	Insurance claims and policy processing clerks	
5850	43-9051	Mail clerks and mail machine operators, except postal service	
5860	43-9061	Office clerks, general	
5900	43-9071	Office machine operators, except computer	
5910	43-9081	Proofreaders and copy markers	
5920	43-9111	Statistical assistants	
5930	43-9199	Office and administrative support workers, all other	
6000	45-1010	First-line supervisors/managers of farming, fishing, and forestry workers	
6010	45-2011	Agricultural inspectors	
6020	45-2021	Animal breeders	
6040	45-2041	Graders and sorters, agricultural products	
6050	45-2090	Miscellaneous agricultural workers	
6100	45-3011	Fishers and related fishing workers	

6110	45-3021	Hunters and trappers	Collapse 7040 and 7320 to standardize and assign the o-net code for 7040.
6120	45-4011	Forest and conservation workers	
6130	45-4020	Logging workers	
6200	47-1011	First-line supervisors/managers of construction trades and extraction workers	
6210	47-2011	Boilermakers	
6220	47-2020	Brickmasons, blockmasons, and stonemasons	
6230	47-2031	Carpenters	
6240	47-2040	Carpet, floor, and tile installers and finishers	
6250	47-2050	Cement masons, concrete finishers, and terrazzo workers	
6260	47-2061	Construction laborers	
6300	47-2071	Paving, surfacing, and tamping equipment operators	
6310	47-2072	Pile-driver operators	
6320	47-2073	Operating engineers and other construction equipment operators	
6330	47-2080	Drywall installers, ceiling tile installers, and tapers	
6350	47-2111	Electricians	
6360	47-2121	Glaziers	
6400	47-2130	Insulation workers	
6420	47-2141	Painters, construction and maintenance	
6430	47-2142	Paperhangers	
6440	47-2150	Pipelayers, plumbers, pipefitters, and steamfitters	
6460	47-2161	Plasterers and stucco masons	
6500	47-2171	Reinforcing iron and rebar workers	
6510	47-2181	Roofers	
6520	47-2211	Sheet metal workers	

6530	47-2221	Structural iron and steel workers	
6600	47-3010	Helpers, construction trades	
6660	47-4011	Construction and building inspectors	
6700	47-4021	Elevator installers and repairers	
6710	47-4031	Fence erectors	
6720	47-4041	Hazardous materials removal workers	
6730	47-4051	Highway maintenance workers	
6740	47-4061	Rail-track laying and maintenance equipment operators	
6750	47-4071	Septic tank servicers and sewer pipe cleaners	
6760	47-4090	Miscellaneous construction and related workers	
6800	47-5010	Derrick, rotary drill, and service unit operators, oil, gas, and mining	
6820	47-5021	Earth drillers, except oil and gas	
6830	47-5031	Explosives workers, ordnance handling experts, and blasters	
6840	47-5040	Mining machine operators	
6910	47-5061	Roof bolters, mining	
6920	47-5071	Roustabouts, oil and gas	
6930	47-5081	Helpers--extraction workers	
6940	47-50XX	Other extraction workers	
7000	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	
7010	49-2011	Computer, automated teller, and office machine repairers	
7020	49-2020	Radio and telecommunications equipment installers and repairers	

7030	49-2091	Avionics technicians	
7040	49-2092	Electric motor, power tool, and related repairers	
7045	49-2092	Electric motor, power tool, home appliance, and related repairers	
7050	49-2093	Electrical and electronics installers and repairers, transportation equipment	
7100	49-209X	Electrical and electronics repairers, industrial and utility	
7110	49-2096	Electronic equipment installers and repairers, motor vehicles	
7055	49-2093	Electrical equipment installers and repairers, mechanical	
7120	49-2097	Electronic home entertainment equipment installers and repairers	
7130	49-2098	Security and fire alarm systems installers	
7140	49-3011	Aircraft mechanics and service technicians	
7150	49-3021	Automotive body and related repairers	
7160	49-3022	Automotive glass installers and repairers	
7200	49-3023	Automotive service technicians and mechanics	
7210	49-3031	Bus and truck mechanics and diesel engine specialists	Collapse 8060, 8160, and 8710 to standardize. Assign o-net code from 8060.
7220	49-3040	Heavy vehicle and mobile equipment service technicians and mechanics	Collapse 8060, 8160, and 8710 to standardize. Assign o-net code from 8060.
7240	49-3050	Small engine mechanics	
7260	49-3090	Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	
7300	49-9010	Control and valve installers and repairers	

7310	49-9021	Heating, air conditioning, and refrigeration mechanics and installers	
7320	49-9031	Home appliance repairers	
7330	49-904X	Industrial and refractory machinery mechanics	
7340	49-9042	Maintenance and repair workers, general	
7350	49-9043	Maintenance workers, machinery	
7360	49-9044	Millwrights	
7410	49-9051	Electrical power-line installers and repairers	
7420	49-9052	Telecommunications line installers and repairers	
7430	49-9060	Precision instrument and equipment repairers	
7510	49-9091	Coin, vending, and amusement machine servicers and repairers	
7520	49-9092	Commercial divers	
7540	49-9094	Locksmiths and safe repairers	
7550	49-9095	Manufactured building and mobile home installers	
7560	49-9096	Riggers	
7600	49-9097	Signal and track switch repairers	
7610	49-9098	Helpers--installation, maintenance, and repair workers	
7620	49-909X	Other installation, maintenance, and repair workers	
7700	51-1011	First-line supervisors/managers of production and operating workers	
7710	51-2011	Aircraft structure, surfaces, rigging, and systems assemblers	
7720	51-2020	Electrical, electronics, and electromechanical assemblers	

7730	51-2031	Engine and other machine assemblers	
7740	51-2041	Structural metal fabricators and fitters	
7750	51-2090	Miscellaneous assemblers and fabricators	
7800	51-3011	Bakers	
7810	51-3020	Butchers and other meat, poultry, and fish processing workers	
7830	51-3091	Food and tobacco roasting, baking, and drying machine operators and tenders	
7840	51-3092	Food batchmakers	
7850	51-3093	Food cooking machine operators and tenders	
7900	51-4010	Computer control programmers and operators	
7920	51-4021	Extruding and drawing machine setters, operators, and tenders, metal and plastic	
7930	51-4022	Forging machine setters, operators, and tenders, metal and plastic	
7940	51-4023	Rolling machine setters, operators, and tenders, metal and plastic	
7950	51-4031	Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	
7960	51-4032	Drilling and boring machine tool setters, operators, and tenders, metal and plastic	
8000	51-4033	Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders,	
8010	51-4034	Lathe and turning machine tool setters, operators, and tenders, metal and plastic	

8020	51-4035	Milling and planing machine setters, operators, and tenders, metal and plastic	
8030	51-4041	Machinists	
8040	51-4050	Metal furnace and kiln operators and tenders	
8060	51-4060	Model makers and patternmakers, metal and plastic	
8100	51-4070	Molders and molding machine setters, operators, and tenders, metal and plastic	
8120	51-4081	Multiple machine tool setters, operators, and tenders, metal and plastic	
8130	51-4111	Tool and die makers	
8140	51-4120	Welding, soldering, and brazing workers	
8150	51-4191	Heat treating equipment setters, operators, and tenders, metal and plastic	
8160	51-4192	Lay-out workers, metal and plastic	
8200	51-4193	Plating and coating machine setters, operators, and tenders, metal and plastic	
8210	51-4194	Tool grinders, filers, and sharpeners	
8220	51-4199	Metalworkers and plastic workers, all other	
8230	51-5010	Bookbinders and bindery workers	
8240	51-5021	Job printers	
8250	51-5022	Prepress technicians and workers	
8260	51-5023	Printing machine operators	
8300	51-6011	Laundry and dry-cleaning workers	
8310	51-6021	Pressers, textile, garment, and related materials	
8320	51-6031	Sewing machine operators	

8330	51-6041	Shoe and leather workers and repairers	
8340	51-6042	Shoe machine operators and tenders	
8350	51-6050	Tailors, dressmakers, and sewers	
8360	51-6061	Textile bleaching and dyeing machine operators and tenders	
8400	51-6062	Textile cutting machine setters, operators, and tenders	
8410	51-6063	Textile knitting and weaving machine setters, operators, and tenders	
8420	51-6064	Textile winding, twisting, and drawing out machine setters, operators, and tenders	
8430	51-6091	Extruding and forming machine setters, operators, and tenders, synthetic and glass fiber	
8440	51-6092	Fabric and apparel patternmakers	
8450	51-6093	Upholsterers	
8460	51-6099	Textile, apparel, and furnishings workers, all other	
8500	51-7011	Cabinetmakers and bench carpenters	
8510	51-7021	Furniture finishers	
8520	51-7030	Model makers and patternmakers, wood	
8530	51-7041	Sawing machine setters, operators, and tenders, wood	
8540	51-7042	Woodworking machine setters, operators, and tenders, except sawing	
8550	51-7099	Woodworkers, all other	
8600	51-8010	Power plant operators, distributors, and dispatchers	
8610	51-8021	Stationary engineers and boiler operators	

8620	51-8031	Water and liquid waste treatment plant and system operators	
8630	51-8090	Miscellaneous plant and system operators	
8640	51-9010	Chemical processing machine setters, operators, and tenders	
8650	51-9020	Crushing, grinding, polishing, mixing, and blending workers	
8710	51-9030	Cutting workers	
8715	51-4060	Patternmakers, lay-out workers, and cutters	
8720	51-9041	Extruding, forming, pressing, and compacting machine setters, operators, and tenders	
8730	51-9051	Furnace, kiln, oven, drier, and kettle operators and tenders	
8740	51-9061	Inspectors, testers, sorters, samplers, and weighers	
8750	51-9071	Jewelers and precious stone and metal workers	
8760	51-9080	Medical, dental, and ophthalmic laboratory technicians	
8800	51-9111	Packaging and filling machine operators and tenders	
8810	51-9120	Painting workers	
8830	51-9130	Photographic process workers and processing machine operators	
8840	51-9141	Semiconductor processors	
8850	51-9191	Cementing and gluing machine operators and tenders	
8860	51-9192	Cleaning, washing, and metal pickling equipment operators and tenders	
8900	51-9193	Cooling and freezing equipment operators and tenders	
8910	51-9194	Etchers and engravers	

8920	51-9195	Molders, shapers, and casters, except metal and plastic	
8930	51-9196	Paper goods machine setters, operators, and tenders	
8940	51-9197	Tire builders	
8950	51-9198	Helpers--production workers	
8960	51-9199	Production workers, all other	
9000	53-1000	Supervisors, transportation and material moving workers	
9030	53-2010	Aircraft pilots and flight engineers	
9040	53-2020	Air traffic controllers and airfield operations specialists	
9110	53-3011	Ambulance drivers and attendants, except emergency medical technicians	
9120	53-3020	Bus drivers	
9130	53-3030	Driver/sales workers and truck drivers	
9140	53-3041	Taxi drivers and chauffeurs	
9150	53-3099	Motor vehicle operators, all other	
9200	53-4010	Locomotive engineers and operators	
9230	53-4021	Railroad brake, signal, and switch operators	
9240	53-4031	Railroad conductors and yardmasters	
9260	53-30XX	Subway, streetcar, and other rail transportation workers	
9300	53-5011	Sailors and marine oilers	
9310	53-5020	Ship and boat captains and operators	
9330	53-5031	Ship engineers	
9340	53-6011	Bridge and lock tenders	
9350	53-6021	Parking lot attendants	
9360	53-6031	Service station attendants	
9410	53-6051	Transportation inspectors	
9420	53-60XX	Other transportation workers	

9500	53-7011	Conveyor operators and tenders	
9510	53-7021	Crane and tower operators	
9520	53-7030	Dredge, excavating, and loading machine operators	
9560	53-7041	Hoist and winch operators	
9600	53-7051	Industrial truck and tractor operators	
9610	53-7061	Cleaners of vehicles and equipment	
9620	53-7062	Laborers and freight, stock, and material movers, hand	Collapse 9360 and 9650 to standardize. Assign o-net code for 9360.
9630	53-7063	Machine feeders and offbearers	
9640	53-7064	Packers and packagers, hand	
9650	53-7070	Pumping station operators	
9655	53-6031	Garage and service station related occupations	
9720	53-7081	Refuse and recyclable material collectors	
9730	53-7111	Shuttle car operators	
9740	53-7121	Tank car, truck, and ship loaders	
9750	53-7199	Material moving workers, all other	
9840		Persons whose current labor force status is unemployed and last job was Armed Forces	
-1		Not in universe	

Initial In-depth Interview Schedule

[Questions below represent themes rather than a script. I may have changed specific question wording, or asked additional questions not represented when I found an important theme repeated in interviews that I missed in the initial interview schedule.]

If you don't mind, I am going to tape this conversation. This is so that I can listen to you, rather than take notes. First, let's make up a name for you, so that your privacy will be protected. You are the expert here. I am the learner. I'll ask a few general questions, but you can talk about anything you feel is important, even if I don't ask about it. And if you don't like my questions, you don't have to answer them. One more thing – if you want to answer off the record, we can turn the tape recorder off, and then turn it on again later. In fact, why don't you hold the tape recorder? That way, you can turn it on and off yourself. Are you ready to get started?

1. Tell me a little bit about yourself. (Probe for parents' occupation, education, whether they grew up in same place, where their parents and grandparents grew up)
 - a. How old are you?
 - b. Where did you grow up?
 - c. Tell me about your parents, grandparents, brothers and sisters?
 - d. How have you spent your time since you left school?
2. What does a typical day look like for you?
3. Tell me about your family
 - a. Do you live with anyone else? (Probe marital status, children)

Now I am going to ask you some general questions about your experiences with [disability]

4. At what point did you consider yourself to be disabled? (Probe for age at disability onset, what they were doing (going to school, working, etc.))
5. Before you became disabled, what did a typical day look like?
6. What changed after you became disabled?
7. What would you describe as the greatest challenges associated with [your disability]?

Now I am going to ask you some general questions about work

8. What is your current work situation? (Probe for need for accommodations; kind of accommodations; if employed, employer willingness to provide accommodations)
 - a. What kind of work situation would you like to pursue?
 - b. What would be your minimum criteria?
 - c. What about your ideal work situation?
 - d. How easy would it be for you to get a job that meets your minimum criteria? How about your ideal work situation?
 - e. (If employed) How does your current work situation match up with your ideal work situation?
 - f. (probe for what aspects of work seem to be most/least important)
9. Have you ever felt like you were treated differently in a work situation because you had a disability? (If yes,) Can you tell me a little about what happened?
10. Have you ever felt like you were not interviewed for a job, did not get a job, or were fired from a job because you had a disability? (If yes,) Can you tell me more about that?
11. (If appropriate, probe for whether they have ever heard of the Americans with Disabilities Act, and if so, if they thought it affected their personal lives)

Now I'm going to ask you some questions about sources of support that you receive in your day-to-day life. I'd like to begin by talking about programs for people with disabilities.

12. Do you currently receive any services or assistance – like help paying for school, vocational training, or benefits counseling – because you have [a disability]? (Probe for what kind, sources of services, how long, their satisfaction with services). (If no) Have you ever received any services because you have a disability?
13. Do you currently receive any other kinds of services or assistance related to your disability or that you receive because you have a disability? (Probe for public assistance benefit receipt)
14. Do you receive any kinds of services or assistance that is not related to your disability?

Now I'd like to talk to you about support you get from people in your life

15. Who would you describe as the most important people in your social network? How do you know each person? (probe for relationship, kinds of assistance extended (for example, borrowing money, getting help with household chores, getting advice)

Thank you for your time. Your insights are extremely valuable to this research. I am trying to contact other people with disabilities who would be interested in talking to me. Can you think anyone who might be interested in talking with me?