

INTRODUCTION TO THE STUDY OF
CAREERS AND THEIR HISTORY

Chapter 1

The History of the Modern Career: An Introduction

John Brown, Marco H.D. van Leeuwen, and David Mitch

Introduction

Both historians and those interested in current labour market policy have recently expressed renewed interest in the history of working lives. The development of the 'new labor' and 'new social history' has turned attention to the experience of the lives of members of the working class beyond their involvement in labor organizations (Van der Linden, 2001; Kocka, 2001). Historians and sociologists on both sides of the Atlantic have recently stressed occupations more and social classes less (e.g. Sobek, 2001; Sorensen, 2000). They have placed particular emphasis on the transformation of the working lives of women and on the continuing rise in educational attainment. An important part of this history has consisted of what will in this volume be termed the career. The career is the sequence of training, education, jobs, and non-market work that has marked the lives of individuals from when they began schooling or entered the work-force until their retirement.

The task for historians of understanding the patterns of careers and the forces that have shaped them has become particularly urgent with the perception that in developed economies, the stable career paths for blue and white collar workers alike that characterized the half century after World War II are potentially in jeopardy. Institutions such as on-the-job training or apprenticeships for the acquisition of skills, well-defined job ladders, and systems of training and promotion within large corporations and lifetime pensions following retirement that once supported the stability of career paths appear to be giving way to much greater fluidity in movement among jobs and among sectors. Since the 1980s, the rapid decline of unionization, the decline in the importance of the manufacturing sector, and rapid technological change have prompted concerns in the United States about the survival of well-defined or 'modern' career paths. In Western Europe, two decades of stubbornly high unemployment have prompted calls for a rethinking of job protection and other mechanisms designed to enhance the stability of the working life that remain a key components of the post-1945 social contract. Concerns about the consequences of these developments for working lives across the spectrum of incomes, but particularly for blue- and white-collar members of the middle class, have prompted a re-examination of what they may

portend for the future of employment relationships and indeed, of work in general.

This volume considers the historical origins of the 'modern' career beginning in the mid- to late-nineteenth century. It explores the structures shaping the modern career and the forces leading to the institutional innovations associated with modern career structures. It expands our understanding in other directions as well. It offers insights into alternative paths to career formation other than the 'modern' trajectory, whether for professional chemists, working class migrants to Munich, or women graduates of the prominent women's college of Cambridge University. The essays explore the forces shaping the paths of the working lives of individuals, the scope for individual men and women to respond to these forces and the factors that have influenced their responses.

Recent developments in the collection and analysis of longitudinal data on individuals have allowed historians studying careers to merge the insights of two disparate historical literatures. The career implies that the work-life of an individual is not just a random sequence of work-place experiences, but instead follows a temporal structure. The historian of the career faces the challenge of relating the career structures present in the economy to the inherently idiosyncratic work-life experiences of actual individuals. One historical literature documents the presence of myriad career structures, whether in the traditional crafts from apprenticeship to master, up the agricultural ladder from the labourer to the farm owner, or through the corporation from the management trainee to the chief executive officer. Another literature documents the economic and social mobility of individuals (or members of broad occupational groupings) over the course of their working lives with limited consideration given to the institutional structures, conditions in the labour market, or role of individual investments in education or training that may have all shaped patterns of mobility (Hershberg, 1981; Kaelble, 1986; van Leeuwen and Mass, 1996; Lynch, 1998).

During the past decade, economic and social historians have been able to draw on important new sources in firm, municipal, and national archives that allow the reconstruction of key moments in the careers of individuals. New approaches to organizing and analyzing these data have supplemented the use of more traditional written sources. Furthermore, several theoretical and statistical tools are now available to analyze information on job-to-job mobility (or immobility), sequences of occupations, and patterns of economic and occupational activity. These analytical tools permit exploration of several key questions, including the causes of career trajectories and the role of education or learning and the importance of socio-economic background on shaping careers.

This volume emerged out of two conferences on the theme of making a career. The first was held in 2001 in Luxembourg and laid the groundwork for the second meeting, which was a session at the 2002 International Economic History Association Congress in Buenos Aires. These conferences for the first time brought together economists, historians, and sociologists who all shared an interest in describing and explaining the social and economic history of careers over the past one and one-half centuries. Although the individual contributions can not form a definitive history of careers, they offer significant geographic and historical scope. They address the social and economic history of the Americas and of Europe and

they address the working lives of all classes of men and women in industry, the services, and agriculture. As a group, they highlight what we believe are the key questions to be answered in an economic and social history of careers:

- What is a career? How is it best described?
- What sources are available for an historical study of careers?
- What accounts for the emergence of modern career structures?
- What explains the contours of careers for those working outside of formal structures of careers?
- How do social or economic structures pose barriers to the realization of the career?

This introduction turns first to the task of definition. Defining the term ‘career’ as an object of historical study highlights the importance of formal versus informal structures of careers and raises basic questions about how to characterize the pattern and outcome of the working life. This is followed by a review of possible explanations for the emergence of the modern career in order to highlight some of the key themes in the historical literature and some of the significant debates that the papers in this volume address. A survey of key sources is then provided to underscore an important strength of the new research being conducted on the history of careers: the diversity of sources. New methods have also been applied to the question of the history of careers. The concluding summary of the papers in this volume highlights the contributions they make to our understanding of the history of careers and suggests some potential directions for future research.

What Is a Career?

The most straightforward definition of a career is as synonymous with the work-life history of an individual; this approach effectively encompasses the open-ended range of historical situations considered in this volume. However, a variety of alternative approaches to defining the career will be considered here because they have influenced common understandings of what a career is, because at some points these alternative approaches will influence the way a career is conceived in a particular historical context, and because the contrast highlights what is assumed by defining a career as a person’s work-life history.

Defining a career as identical to a person’s work-life history is the broadest approach. It implies that anyone participating in the workforce, no matter how modest their status, will have a career. At the other end of the spectrum from this approach is the common view that the term career should only be applied to working lives of distinctive achievement. An intermediate view is that attaining at least a moderate degree of prosperity and respectability is required. Examples implied by this approach would include a doctor or lawyer with an established practice. However, a definition of career for which progress and advancement are a requisite feature raises the issue of whether large segments of a working population

are necessarily excluded from pursuing a career because they have no prospect of obtaining sufficient success. Form (1968) argues that 'in contemporary industrial society only a minority of the work force participates in careers.'

A second issue that has arisen in the literature on careers is whether the term career should only be applied to situations in which an underlying structure shapes the occupational progression and sequence of training and work. The presence of some sort of occupational hierarchy has been frequently been implicit in the use of the term career in the social sciences. The *Dictionary of Sociology* (Marshall, 1998, p. 55) defines a career as 'a patterned sequence of occupational roles through which individuals move over the course of a working life, implying increased prestige and other rewards, although not excluding downward mobility' where the phrase 'patterned sequence' implies some additional structure to the presence of a hierarchy. At this point, one can note a number of different influences from various social science disciplines regarding the nature of any structure leading to a 'patterned sequence.'

Psychology is the social science discipline that makes the most explicit use of the term career. The literature on vocational guidance and career development has refined the concept and developed a range of applications. A psychological approach to the career characterizes distinctive traits of individuals with the objective of providing guidance to the employer on how he or she could make most effective use of the individual as an employee (Lancashire, 1971; Betz, Fitzgerald, and Hill, 1989; Cytrynbaum and Crites, 1989; Dalton, 1989; Van Maanen, 1977, p. 6). Sociological approaches to the career focus on interrelations between people and the setting in which the career develops rather than upon the experience of the individual in a particular setting. Some sociologists emphasize the role of institutions and organizations in structuring career paths. Others stress the interplay between the individual and the work environment (Barley, 1989). Sociology also investigates the influence of the career (or work-life) on mobility and social stratification. One can also view the work-life of the individual as shaped primarily by the larger organization by which the person is employed. Finally, industrial and occupational sociology focus on the experiences of individuals as workers and members of occupational groups. Further exposition of some basic sociological models of the career is provided in Chapter 3 by Maas, in the literature review of Chapter 4 by Miles and Savage and in the discussion of recent theory primarily from economic sociology in Chapter 11 by Van Leeuwen and Mass.

Economics has devoted less attention to careers *per se*. Rather, research has focused on the development and rationale for internal labour markets, which include a progression of positions ('job ladders') that can be attained by promotion within the firm and the role of prior training and experience on-the-job for acquiring skills. Some of the debate is over the extent to which job ladders are formal and rigid (Doeringer and Piore, 1985; Osterman, 1984). The remainder is over why internal labour markets exist. Doeringer and Piore (1985) argue that they reflect class power relationships rather than profit-maximizing behaviour. Elbaum (1984) suggests that internal labour markets reflect institutional interactions between labour and management. Wachter and Wright (1990) interpret internal labour markets within a neoclassical framework as a means of establishing implicit

contracts and coping with transactions costs in employment policies. The emerging field of personnel economics focuses on important features of internal labor markets. It examines the incentive structures that firms and other organizations utilize to more effectively monitor their employees and to increase their efficiency on the job (Lazear, 1999). It also investigates organizational systems that use career paths as means of sorting workers by ability (Rosenbaum, 1989). Both the sociological and economic approaches recognize that the outcome of the individual career includes more than movement up (or down) a hierarchy of job titles and occupations. It also depends upon the growth in earnings, which can vary with job tenure and experience, and job security. As Laura Owen's discussion brings out more fully in Chapter 2 of this volume, a key issue in the economic approach to the career concerns the degree of worker attachment to a given firm and the degree of worker turnover and movement between firms. Career paths depend not only on occupational structures established by firms and other organizations, but also on decisions made by individuals about when to move between firms and when to change occupation. Economics casts these decisions within a decision-making framework that emphasizes the goal of maximizing life-time earnings (Barney and Lawrence, 1989; Sicherman and Galor, 1990). Career patterns reflect as much choices by the individuals who experience them as they do the institutions and organizations that individuals encounter over their working lives. Or to paraphrase Van Maanen (1977, p. 8), people make careers as much as careers make people.

All of these approaches expand the scope of the concept of a career beyond individuals of exceptional accomplishment and ability to those in the middle and working classes (on the concept of blue collar careers see Thomas, 1989). Indeed, the internal labour market literature has proposed that blue-collar work-life experiences can be more definitely structured than white-collar ones (Doeringer and Piore, 1985; Osterman, 1984). In this regard these approaches are consistent with the emphasis in social history of the last several decades on history from below. However, these approaches all presume the presence of some organizational structure shaping occupational choice and compensation incentives. In other words, they presume that an individual's work-life is determined by an employer-employee relationship. However, as Vincent (1993) notes, the tenure of an individual employee with a specific firm is only one of a number of distinct career pathways that can be distinguished from historical evidence on worklives. In addition to career paths based on advancement in a formally defined hierarchical bureaucracy, Vincent following Kanter (1989) distinguishes a professional career model based on non-hierarchical practice of a specific craft or skill (whether professional or artisanal), an entrepreneurial career based on development of a successful business enterprise, and a dynastic career based on transmission of property and other resources to one's descendants. Based on evidence from the 'Family life and work before 1918' oral history project completed at the University of Essex, done with a range of British subjects, Vincent proposes four career paths that have characterised the century between 1850 and the first world war: 'Gold watch' pathways in which the individual remains with the same firm over the entire career; 'migration' pathways in which a recognized skill or trade shapes the movement through a sequence of jobs; the 'meander', or 'the shapeless drift

through a sequence of largely unrelated positions'; and the 'fracture', a career characterized by a break in momentum, only to be resumed at some later point with an entirely different trajectory.

Vincent's typology reminds us that a variety of career paths is possible and that one must look beyond formal organizational structures to become aware of the full range of possibilities. It points to the importance of understanding the historical context in which work-lives developed rather than simply employing a theoretical model from psychology, sociology or economics or simply using occupational mobility measures. It is striking in this regard that a 1989 survey listing 'examples of social science viewpoints on the career concept' reports under the heading of History, 'looking at the reciprocal influence of prominent people and period events on each other' and cites as example Arthur Schlesinger Jr.'s account of the Kennedy White House (Arthur, Hall, and Lawrence, 1989, p.10).

This volume presents studies of the working lives of ordinary individuals, the historical socioeconomic settings in which those lives occurred and the reciprocal influences they exerted on each other. This we understand as a career. As Arthur, Hall, and Lawrence (1989, pp. 11-13) point out, casting the work-life in terms of a career offers distinct analytical advantages. It allows consideration of the interplay between the individual and institutions, organizations, and the social environment more broadly. It permits exploration of the development of an individual's work experiences over time the changes in an individual's relative social position over working life.¹

In sum, the term career as used here will be in its broadest meaning of any series of work experiences over the life course. It includes the 'modern' career or formal career and other forms of highly structured paths for the work-life. It also includes the informal career.

Key Historical Influences on the Modern Career

The emerging historical literature on careers has focussed its attention on providing a typology of careers. These sources suggest that we can divide career structures into two groups, formal and informal. *Formal* careers take place within a well-defined structure of training or education and advancement. Their structure rests with an organization that can be a firm, a government bureaucracy, or a quasi-independent organization such as a professional organization. *Informal* careers also meet the definition set out in the previous section, but their structure can only be reconstructed from information on the actual career pathways of individuals. Most of the historical literature on the emergence of the modern career has focussed on the rise of the modern career within two forms of formal career structures: the development of management bureaucracies for predominantly white collar employees and the creation within firms of opportunities for training and advancement for blue collar employees (Jacoby, 1984). Two key questions have

¹ For further discussion on the concept of a career compared with that of work-life history, see Arthur, Hall, and Lawrence (1989) and Barley (1989).

been posed in this literature. First, why did these forms of the modern career emerge? Second, did they result in material improvement in the well-being of those whose careers they shaped?

The Logic of Industrialism Thesis

One strain of argumentation focuses on the transformation of European and American economies that took place over the long nineteenth century (1815 through 1914). The sociologists and historians of the 'logic of industrialism' school emphasized that the process of modernization brought about by the industrial revolution fundamentally changed the logic of the work place (Inkeles, 1960; Kerr, 1960). Labour recruitment and promotion had formerly been driven by ascription or an individual's status at birth. The national and international competition of the new industrial order compelled managers to recruit efficiently in a similar way in all countries. In addition, the process of modernization introduced a growing fraction of workers to 'modern universal' values. One consequence was a greater willingness to take advantage of the opportunities for upward mobility offered by the industrializing society (Landes, 1969, p. 564). For example, one recent contribution (Stovel, Savage, and Bearman, 1996) argues that the transformation of British banking after 1900 prompted Lloyd's Bank to abandon the 'static' career path of the typical middle class bank clerk. The only entry point for that career was a starting clerk. Under the 'traditional' system, most (middle-class) clerks gained stability, a rising income, and a pension if they remained at the bank, but they had only modest prospects of promotion. The new career system was much more achievement-oriented. Opportunities for advancement were available, but they required much greater geographic mobility and a willingness to acquire additional education or training.

One could make a similar argument for the changes the political and economic transformation of the nineteenth century wrought on the career path marked by traditional European guilds for skilled craftsmen and the services. Guilds restricted entry to member trades to those who had completed apprenticeships with masters who were members of the guild. Guilds often excluded Jews, women, agricultural labourers and non-residents from being admitted as apprentices, and thus from entering the trades. Sons of those who already practiced a given trade received preference in the admission into apprenticeship. Unlike the situation in England and the Americas where they had lost their grip on productive life, guilds maintained positions of authority in the affected trades through much of the eighteenth century. They lost power for political and economic reasons. The French Revolution and Napoleon's conquests overturned existing institutions of the *Ancien Regime*, including guilds, in the areas under direct rule. Competition from alternative ways of organizing production, particularly proto-industrialization, also undermined the economic position of guilds. Doctrines of economic liberalism completed the process of decline by the last third of the nineteenth century.

The 'logic of industrialism' thesis has served as the starting point for a considerable number of sociological and historical studies on intergenerational social mobility. Van Leeuwen and Maas (1996) and Maas and Van Leeuwen (2002) offer overviews of the results of these studies. These studies have not yet reached a

consensus on whether or not industrialisation has led to more openness in societies. This can perhaps be attributed to the difficulties of isolating the impact of changing attitudes with respect to mobility from those attributable to changes in the occupational distribution of the labour force or in the demands for skills. It certainly can be seen as a consequence of the lack of a sufficient body of data that is analyzed in a comparable framework. The task of creating such data has been taken up by the Historical International Social Mobility Analysis group, or HISMA. The absence of agreement can also be attributed to the lack of specificity in the thesis regarding how the industrialization process would produce more occupational openness. Indeed, a general claim that 'achievement' replaced ascription as a primary determinant of occupational choice and advancement presents an oversimplified view of the nature of labour markets before the onset of industrialization.

The Rise of Hierarchical Bureaucratic Management Structures

A more specific link between the economic change of the nineteenth century and the emergence of modern career structures focuses on the rise of hierarchical bureaucratic and managerial organizations. The intellectual underpinnings of this connection can be traced to Max Weber and his work on bureaucracy. According to Weber there are three key elements in what he calls 'modern bureaucracy.' First, the agency in question assigned activities as part of official duties rather than as a matter of personal perogatives. Second, the authority to perform those duties was based on stable rules. Finally, regular procedures governed how those duties would be performed. Weber argued that bureaucracies arose to replace personal and particularistic values as key influences on the process of supervision with rationality, achievement, and objectivity. At the same time a hierarchy was required to establish authority for decisions reached. Weber argues that an agency guided by these elements could only arise in the modern state and in large modern corporations (Weber, 1978, p. 956).

On the face of it, the transformation of the business structures of the developed economies that began in the second half of the nineteenth century offers a striking verification of the importance of the rise of bureaucracies in shaping career structures. Chandler's *Visible Hand* (1977) offered the first comprehensive account of the spread of what he termed 'managerial capitalism.' Chandler has noted that the work of Weber was a far more important influence on his thinking about the modern corporation than was modern micro-economic theory, hence his choice of the title (Chandler, 1988, pp. 297, 304-5). Managerial capitalism separated ownership from management of the firm. The vertical managerial structures that resulted were staffed by professionals—middle management— with little direct financial stake in the firm beyond their salaries. A new range of careers emerged that was associated with personnel offices, evaluations of performance, pensions, and the opportunity to advance through the internal managerial hierarchy of the firm with strong performance. Chandler's subsequent treatment of the management structures of the largest German and British firms in *Scale and Scope* (1990) suggests that this form of management was particularly important in Germany. The forms of ownership in Britain—family ownership or holding companies—

continued to allocate managerial positions to family members or key shareholders. This structure of ownership diminished opportunities for upward mobility compared with the purely professional staffing of the managerial capitalist firm. Owen details the role of hierarchical organization in the development of formal occupational structures below in the Chapter 2. The chapters in Part One of this volume by Shpayer-Makov on English police forces and by Miles and Savage on employment at Lloyds Bank, the Great Western Railway, and the British Post Office explore specific examples of the creation of bureaucratic structures in the workplace.

Two kinds of evidence suggest, however, that a focus on the creation of a particular form of organization (the bureaucracy), particularly as a product of the nineteenth century, might be insufficient to explain the emergence of the modern career. Stovel, Savage, and Bearman (1996) explicitly addresses the question of whether bureaucratic organizational structures *per se* can account for modern career structures. In the case of Lloyds Bank, they find the evidence wanting. In addition, studies of several organizations of the medieval and early modern periods have discovered several examples of large organizations employing bureaucratic systems of organizing the workplace. Late medieval Florence (then one of the wealthiest cities of Europe), the Dutch East Indies Company in the Golden Age (a trading company with a large fleet of ships that served a far-flung network of trading 'settlements' across Africa and Asia), the armies and the navies of emerging nation-states, and colonial administrations from the seventeenth century onward employed bureaucratic organizations.² Structured patterns of employment were also found over the life course of ecclesiastical and bureaucratic elites under the Old Regime (Ago, 1992; Benadusi, 1994). Although these examples may not conform to career structures in the Weberian sense, their existence suggests caution in an attempt to pinpoint when the modern career first appeared. Understanding the appearance of the modern career is best thought of as the quest for the factors that gave rise to it. While these factors may have grown in importance from the late nineteenth century onward to such a degree that it may be excusable to speak of the rise of the modern career in societies at large, the possibility cannot be excluded that some of the same factors operated long before that time on a limited scale in certain sectors of the most advanced economies.

The Development of Internal Labour Markets

The earliest examples of modern careers were available to those in the upper echelons of the social hierarchy. Even Weber's bureaucratic structure appears to be best applied to the middle and upper reaches of the management structures of large organizations. One key development of the nineteenth century was the emergence of internal labor markets, which could had the potential to impose significant structure on the jobs and positions held by blue collar labor workers. Internal labour markets emerged even in organizations or firms that lacked a bureaucratic

²See Bruijn (2002), Burkholder (1998), Ku (1984), Lieven (1984), Oosterhuis (1993), Schouwenburg (1988) and Strieter (1991).

system of management. The contribution by Owen in Chapter 2 reviews key elements of the literature on internal labor markets. The phrase internal labour market is commonly associated with the influential book by Doeringer and Piore (1971), although as Osterman (1984, p. 2) notes, its origin can be traced back to such institutional labour economists as John Dunlop and Clark Kerr. Internal labor markets share characteristics of the bureaucratic management structures noted above. Workers have the opportunity to progress up a ladder of jobs, perhaps even attaining positions (such as a foreman) with some managerial responsibilities. This form of structure typically includes clearly defined job categories, work rules, schemes for discipline, and wage scales. Doeringer and Piore (1985) argue that a central feature of internal labour markets is the rigidity of their rules and procedures. In addition, they conceived of the internal labour market approach as a radical alternative to mainstream neoclassical theory. However, the existence of such arrangements within the firm has prompted considerable research in mainstream labour economics. One important branch of this research is the new field of personnel economics (Lazear, 1999).

One explanation for the emergence of internal labour markets is the rising demand for what Becker (1964) termed firm-specific skills. As Owen points out in Chapter 2, the general skills associated with skilled workers (particularly those trained in apprenticeships) could be applied across a wide range of jobs. In addition, the institution of apprenticeship ensured that the skilled worker, not the firm, bore the costs of training. Firm-specific skills are by contrast only applicable within a particular firm's configuration of machines and work organization. Semi-skilled workers, who were often operatives of specialized machinery associated with mass production methods, constituted a growing share of the industrial labour force by the end of the nineteenth century. Firms required systems of reimbursement and other incentives, including promotions and worker welfare, to ensure that they could recoup their investment in training workers in firm-specific skills. One common feature of internal labor markets is a method of compensation that rewards workers for lengthy job-tenure. Workers in such firms show age-earnings profiles that penalize early departures and reward longer tenures (Akerlof and Yelen, 1986, pp. 1-2). Rewards for seniority, either through scheduled increases in wages or internal promotions, constitute an essential element of this personnel policy, with its stress on predictability, transparency, and fairness. Internal labor market policies will also attempt to select for workers who are more likely to prove reliable and yield a higher *ex post* return on the firm's investment in their training.

Much of the historical literature on internal labour markets focuses on developments in the United States. Sundstrom (1988) finds evidence that key elements of internal labour markets were present in firms in New York and Iowa before the First World War. Others (Jacoby, 1985) date the innovation to a later period. Seltzer and Simons (2001) also provide comprehensive evidence for such practices at the Union Bank of Australia during the period prior to World War I. Nonetheless, all agree that the cost to firms of high turnover were critical reasons for the adoption of the policies. Owen (1995) identifies moves to adopt these policies before 1920 in her firm case studies. Jacoby (1985) and Jacoby and

Sharma (1992) provide a comprehensive account of how in the United States, large firms in the first half of the twentieth century introduced personnel departments to reduce turnover of their blue-collar workforces. The Departments were more systematic in the selection of employees likely to be satisfactory. Workers also received incentives to remain with the firm for an extended period of time.

The Spread of Unionization

Another important institutional development that may have influenced the spread of formal career structures was the spread of unionization through much of Europe and the Americas from the last third of the nineteenth century onwards. Unionization initially took hold among some of the most skilled workers and then spread to other sectors of the labour force. Union contracts essentially combined two developments previously discussed. An essential part of many contracts was to grant unions the role of gatekeeper for the hiring of new workers into unionized jobs. Applicants for specific jobs were required to meet formal requirements for training and experience. In its most developed form the union restricted the hiring of skilled workers to those who had already completed apprenticeships of five to seven years, which may have also been supervised by unions themselves. The effect of this policy was to limit the supply of skilled workers and ensure union members higher earnings because of that scarcity (Penn, 1984; Bennett, 1986). As Badoza points out in her contribution in Chapter 8, the gatekeeper strategy also ensured that new employees would be likely to be sympathetic with the aims and strategies of the union.

Another key element of union contracts noted by Jacoby and Sharma (1992) complemented the emphasis on formal training and experience. Contracts sought to replace what might have been viewed as an arbitrary system of termination of employment or promotions by company managers with elaborate rules governing procedures for promotion and dismissal of workers. The foremost criterion for advancement (or for layoff) was an obvious observable characteristic of a worker, his or her seniority. Other rewards included compensation that rose with the number of years a person had been employed and benefits that accrued to the worker over the time of employment, but which could be forfeited if the employee did not meet a minimum period required for vesting. Rules could also lead to the loss of seniority if a worker assumed a new position within the company. Chapter 7 by Hirsch and Reiff highlights the effect these kinds of seniority-based job rules had on the choices of workers who had careers at the workshops of the Pullman Company Sleeping Car Company in the United States.

The development of informal career structures has also shaped the modern career. The emergence of informal structures reflects several importance social changes. Most of the contributions to this volume focus on the mechanisms through which social and economic change generated new patterns of careers. The discussion here will focus on three of them: rising levels of education and training, the surge in geographic mobility during the last half of the nineteenth century, and the presence of legal and social discrimination against women and ethnic, racial, and religious minorities.

Education

The nineteenth and twentieth centuries saw the widespread diffusion of educational institutions that took on the task of providing informal and formal qualifications for many occupations. For a growing range of career paths, acquiring the appropriate formal education became essential. By the late nineteenth century, advanced primary education through about the age of fourteen was widely available in most advanced economies. For young people 15 to 18 years old, new alternatives for formal certification emerged that increasingly substituted for on-the-job acquisition of skills. In the United States, the high school, with its coursework in the sciences, higher-level mathematics, and the humanities, offered young people general skills that enhanced their ability to adapt to high geographic mobility and rapid technological change. In 1900, only a small minority of American eighteen-year olds graduated from high school. By 1940, the majority did so (Goldin, 2001). The high school diploma became a credential essential for entrance into growing numbers of occupations. European countries developed systems that tracked students according to their expected lifetime occupation. The vast majority of young people were expected to remain in blue collar or lower-level white-collar occupations throughout their lives. In Europe, the formal qualifications provided by specialized technical education became part of a process of certification that increasingly defined the career path within an occupation or industry. This trend was especially advanced in Germany. In the late nineteenth century, German craft chambers in occupations such as construction and metalworking established formal apprenticeship programs that combined classroom instruction, continuing education, and on-the-job training. By the mid-twentieth century, this system had been extended to include most of commerce and industry (Hansen, 1997).

The development and spread of specialized knowledge during the nineteenth century in fields as diverse as medicine, chemistry, engineering, and public administration worked in tandem with other political and social changes to reshape the course of professional careers.³ In the same way that guilds regulated entry and access to training for a wide range of skilled trades and commerce through the middle of the eighteenth century, in traditional European society ‘corporations’ operating independent of the state often set the requirements for access to professions such as law or medicine. One of the best-known examples is the Inns of Court of British barristers. Those seeking a career in the law, in medicine, or as an apothecary received practical training through the relevant corporative organization. The church maintained control over the clergy, and local or provincial governments regulated most other professions. Access often depended upon the ability to pay or having political connections rather than a demonstrated level of expertise. Lundgreen (1988) notes that for virtually all professions, a general humanistic education, whether an American liberal arts college (or

³ For this discussion, professions include the clergy, lawyers and judges, physicians, teachers, architects, engineers, chemists, and upper level managers of firms. Siegrist (1988) provides a helpful overview of the development of professions.

university) bachelor's degree, a diploma from Oxbridge, a German *Abitur*, or a French *baccalauréat* was a necessity though not a formal requirement.

The early nineteenth century brought about a unification of policy at the level of the nation-state, albeit in two contradictory directions. The abolition of most elements of state regulation in countries with a strong democratic tradition—the United States and Switzerland—initially opened up most professions to free competition; market forces determined the suitability of the practitioner for the position. In Europe, Napoleonic-era reforms that initially opened up access as part of the general process of liberalization gave way to a system of state-sponsored examinations and licensing, although formal educational requirements were not yet included. By the beginning of the twentieth century, the modern day practice of requiring that professionals complete a specialized education had taken hold across Europe and the United States. The development of faculties of law and medicine and the sciences within the universities and the creation of specialized schools of engineering, teaching, architecture, and business administration provided the formal education required prior to entering the career. For most professions, passing formal examinations and meeting other requirements for certification were also required.

The transformation of the education of professionals arguably enhanced the importance of formal qualifications for achieving access to the professions even as other influences, such as family background, wealth, or even practical experience declined in importance. The creation of formal certification and the development of specialized knowledge also led to the expansion of white-collar employees relative to independent professionals. By the early twentieth century, professional careers within firm hierarchies or government bureaucracies had become much more common as Chapter 15 in this volume by Mackie and Roberts emphasizes.

Migration and Emigration

The last half of nineteenth century also witnessed an unprecedented surge in geographic mobility. Modern analyses assign migration an important role in the development of career strategies, since a change of job is quite often associated with a move to another city or region (Yankow, 2003). For the 60 years prior to 1914, it is plausible that migration was an essential element of the work lives of millions on both sides of the Atlantic. Migration increased in response to rapid shifts in opportunity, both as industrialization took hold and as the farming sectors of most European countries faced intense competition from the Americas and then Russia. The development of railroads and the shift from sail to steam in transoceanic shipping cut the cost of passenger transportation substantially, primarily by reducing the time required for the journey. Effective information networks developed to inform potential migrants or emigrants of opportunities elsewhere. The surge in mobility is difficult to quantify. Trans-oceanic migration resulted in the transfer of about 13 percent of the potential working age population from Europe to the Americas over the period 1870 to 1910 (O'Rourke and Williamson, 1999, p.155). For the preceding period, the transfer could only have been significant for Ireland and some of the German states.

Estimates of migration within national economies are more difficult to develop. Galenson (1991, p. 584) reports decade-to-decade persistence rates of 30 to 40 percent for a variety of American cities and rural counties in the mid-nineteenth century. For England and Wales over the period 1841 through 1911, rural areas lost more than 80 percent of their natural increase to out-migration (Cairncross, 1949, p.85). Nipperdey (1993, pp. 39-42) notes that for Germany from 1871 to 1910, at least one-half of the labor force migrated some distance as part of the transition from rural to urban employment during this period of rapid industrialization. By all accounts, a period of substantially decreased mobility followed from the onset of World War I through the end of World War II. Emigration from Europe to the new world plummeted after the imposition of restrictions on immigration. Evidence from Germany suggests that inter-city migration declined substantially as well. While one might presume that rising geographical mobility would be associated with increasing mobility between employers and occupations over the course of one's life, the actual extent and nature of this association are matters for investigation. Migration plays a central role in the accounts of the careers presented in a number of the studies in this volume, including the contributions by van Leeuwen and Maas, Raspadori, and Brown and Neumeier.

Discrimination by Race, Religion, and Sex

Even as career opportunities were unfolding, a new set of influences on careers emerged as societies on both sides of Atlantic: barriers to employment faced by a variety of social groups. In the United States, the emancipation of the large enslaved African-American minority in the mid-1860s prompted social and political responses to reserve access to many careers for white Americans. The legal efforts to discriminate culminated in the Jim Crow laws of the late nineteenth century, which enforced strict racial segregation in the American South until the last third of the twentieth century. With the exception of agriculture, the informal practice of firms and (white) employees generally restricted African-Americans to the most menial jobs within the occupational hierarchy. The contribution by Hirsch and Reiff highlights the importance of racial discrimination in the external labour market for the differences in the career strategies of white and black workers at the Pullman shops. Various groups of immigrants during the nineteenth century faced lesser, but no less pernicious barriers to career paths. Restrictions aimed at Jews were particularly effective at limiting professional careers. In the United States, leading universities and colleges discriminated against the admission of Jewish students. In Germany, emancipation had opened most careers to Jews by the establishment of the Empire in 1871. Nonetheless, practicing Jews were still barred from the officer corps and most upper level positions in the government bureaucracy and executive positions. Antipathy among the faculties of German universities, which still retained corporative privileges, prevented Jews from receiving professorships. Varying degrees of discrimination against Jews can be found in other countries of Europe as well.

Women faced remarkable shifts in the social and legal acceptability of creating a career outside of the home. The longer-term trend since the early 1800s has been

the removal of social and legal barriers. The contributions by Kay and Thane illustrate two periods, the second half of the nineteenth century and again after World War I, when this trend was reversed. Until recently, the range of socially acceptable work was quite limited. The demands of child care, social pressures, and firm policies including 'marriage bars' restricted careers for a large share of women to a short period up to marriage or the birth of the first child (Vincent, 1993, pp. 228-229). Marriage bars first appeared in the United States towards the end of the nineteenth century. By the Great Depression, they were apparently widespread in both public employment (teaching) and in the private sector. They either prohibited hiring married women or they required women to quit if they became married. They were found in other countries as well and only were removed during the second half of the twentieth century (Goldin, 1990, pp. 160-179).

Form (1968, p. 253) has suggested that the range of developments just surveyed could have conflicting and offsetting influences on trends in careers. While the spread of bureaucracy in government and in the private sector may have cultivated more definite career patterns, industrialization could have introduced instabilities in technologies and organizations that introduced more irregularity into career patterns. Similarly, rising educational attainment and rising rates of migration could have enhanced career prospects for some. These speculations suggest the need for understanding both the development of formal and informal structures in concrete historical settings and the influence they exerted; this volume addresses that need.

Historical Sources Used in the Study of Careers

Studying individual working lives places heavy demands on information that most commonly used historical sources, such as censuses or population counts, are unable to meet. Any source used to study careers must provide information on occupational status and perhaps income at more than one point in time. Preferably, this information is available at several points during the working life. In addition, information on the place of employment (its size and the kind of technology it used) and the type of positions the individual held is very useful. Personal characteristics of the individual that may matter include the date of birth, prior training or education, the place of origin, marital status, religion, the number of children, and the occupation (and income) of the individual's parents. In short, longitudinal information on the path of the career is required along with key personal characteristics.

Developing longitudinal data on an individual in historical settings poses three challenges. The first is ensuring that the same individual is being tracked over time. Variations in the spelling of names (and even places of birth) and varying accuracy in the information on the actual year (or date) of birth can complicate the task of matching information on an individual from two different sets of records (nominal linkage). This problem is particularly severe in societies where the maiden name of the bride is no longer recorded after marriage. Limitations on available sources,

such as restrictions on access to manuscript census records or the lack of records for earlier periods, can also pose obstacles to capturing longer periods of the individual's career history. Finally, adult mortality, outmigration, poor record-keeping, or variations in spelling can all lead to the failure to link information on the same individual from different sources. If the attrition or matching bias is correlated with causal variables of interest, the failure to complete nominal linkage of all individuals in an initial sample could bias the resulting sample.

Each of the contributions to this volume has been able to surmount these challenges through the ingenious use of an historical source (or sources) that allow reconstruction of longitudinal information on the working lives of individuals. The sources include the payroll or personnel records of firms, farms and the police; labour counts and censuses; insurance company records; surveys based upon lists of alumni maintained by colleges and universities; marriage records; migration lists; records of local churches; population registers; municipal records; and obituaries. Each contribution provides more detail about the actual archival or other sources. This discussion provides an overview and a brief summary of the some of the chief advantages and limitations of each source.

Company records can offer rich information for the history of careers. Payroll records, such as those of the Italian steel factory studied by Raspadori, the printing firms examined by Badoza and the farm labour books of the kind used by Mitch, offer a starting point for the study of working class careers. A longer run of these records can offer valuable information on the development of the working life within the firm or farm, including earnings and often information on the kinds of jobs performed. Re-entry after an absence provides additional information on a potential relationship with the employer. Of course, the problems associated with nominal linkage can apply to these records as well, although they are most likely much less severe. It is also unusual to find payroll records that span long periods of time.

Personnel dossiers, which were records maintained by the employer over the employee's tenure with the firm, already carry out the task of nominal linkage. They provide the researcher with ready-made longitudinal profiles. Ideally, relevant dates (e.g. of hiring, promotion, dismissal), occupations, functions, and salaries of the employees have been recorded along with other material such as an assessment of performance. Records may also include information on the reason for a voluntary or involuntary departure from the company (e.g., a strike), the kind of reference provided when the employee was first hired, and the employee's age, family circumstances, and family background, including race. Access to company policy documents is invaluable for interpreting this information. Several of the contributions to the volume have drawn on these kinds of records, including the Pullman Company of the United States (see the chapter by Hirsch and Reiff), the London Metropolitan Police (Shpayer-Makov), two printing firms in Buenos Aires (Badoza), Lloyds Bank, the Great Western Railway, and the British Post Office (Miles and Savage) and the Canadian Pacific Railroad (MacKinnon).

Since they have the potential to provide detail on earnings and job assignments, personnel records are particularly well-suited for the analysis of internal labour markets. Indeed, as Hirsch and Reiff mention in their study of the Pullman

Company, the existence of detailed personnel records before the 1930s is often a testimony to the rise of bureaucratic methods of managing labour relations. Nonetheless, smaller family-run firms of the kind studied by Badoza also occasionally kept these kinds of records.

The chief drawbacks of company records are their narrow focus, the potential in them for selection bias, and their idiosyncratic collection of information. Company records are more likely to survive for larger manufacturing organizations that were still in operation in the last part of the twentieth century when large-scale efforts were being made to archive historical business records. Sectors in which smaller firms were the norm, including local transportation, most other services including retail and hospitality, food preparation, clothing and construction have been less likely to leave behind personnel records. Using other sources (cadastral records, population censuses, or population registries) to supplement the information in firm records can partially overcome their narrow focus. The contributions by Raspadori and Mitch offer ingenious approaches to broadening the information beyond the firm-level sources that are the core of their studies. Firm records may also be difficult to interpret because of the ways that jobs are defined or because supplementary information required for the interpretation of records is missing from the archival collection.

Records kept by professional organizations and educational institutions constitute another source for longitudinal information on working lives. Professional organizations also collect biographical information about their members as part of the routine of maintaining membership lists and publishing directories. The contribution by Mackie and Roberts draws upon a large database of the working lives of professional chemists who were members of one of the three British organizations of professional chemists. Obituaries in the scientific journals sponsored by the organization, membership lists, directories, and various editions of *Who Was Who* enable the creation of collective biographies that span the late nineteenth to the middle twentieth century. Similar to personnel records, these sources permit detailed reconstruction of education, occupations, and positions of a large professional group. Aside from some modest problems with nominal linkage of these disparate sources, they also suffer a problem of attrition. Only those who remain active professionally as chemists remain in the sample. Those exiting for other forms of employment are lost.

Many British and American secondary and post-secondary institutions maintain records on their graduates and often update occupational information. The contribution by Thane draws upon surveys sent to alumni of an all women college (Girton College) of Cambridge University and uses follow-up interviews to reconstruct their careers, which included periods of paid employment, significant unpaid work for the voluntary sector, and child care. Although concerns about privacy may restrict access to these kinds of records (and reduce the response rate on surveys), they do hold the promise for a comprehensive perspective on professional working lives since changes in occupation or moves out of the labour market will not lead to their exit from the sample.

Other studies also draw upon biographical or autobiographical material, either from collections of individual biographies or through the use of oral history. For

example, Requate (1995) developed a collective biography of almost 800 editors of German newspapers for the nineteenth century using obituaries, records of the police and the Ministry of the Interior and commemorative publications of newspapers. In Chapter 10, Kay draws upon the autobiographies of women from Victorian England to orient her research into the working lives of middle class women who gained a livelihood as proprietors. A large oral history project of the University of Essex, The 'Family Life and Work Experience before 1918', conducted interviews in the mid-1970s with over 450 individuals with memories of the period before 1918. Vincent (1993) draws upon these interviews to map the qualitative dimensions of careers. Burnett, Vincent, and Myall (1984-1989) have compiled an extensive annotated bibliography of printed and manuscript working class autobiographies for Britain from the last two and a half centuries; they include short digests of the salient events of each autobiography included. Both the biographical and autobiographical approaches have the advantage of filling in detail on individual working lives that would not be preserved in company records. They have the disadvantage of potential gaps in records because of missing information or faulty memories. Only some will include information on income at various points in the working life, and the timing of occupational changes can be rather vague.

Insurance records constitute another kind of historical record that can provide information on occupations and occupational change. Kay's chapter uses records of London fire insurance companies to look at careers of men and women who were proprietors from the early 1760s through the early 1860s. By the time of her analysis, most businesses purchased some form of fire insurance. These records could include information on the type of business the proprietor was engaged in and the value of goods insured. They offer valuable insights into the distribution of proprietorship during a period when there are no other counts of businesses, and they allow comparison with the mid-Victorian era. Kay takes advantage of census manuscripts to find further detail on the female proprietors in her sample, including their marital status.

If fire was an important risk for proprietors, the loss of income because of ill health was—and remains—a key concern of wageworkers. Laws mandating comprehensive health and accident insurance created another set of records that can be drawn upon for the study of careers. By the mid-1880s, German federal law required compulsory membership in a sickness fund for all workers between the ages of 16 and 70 whose work lasted longer than a week. The registers for membership in accident and sickness insurance funds that are found in archival collections of firm records offer an alternative and more widely available source of information on employment at German firms than extant payroll or personnel records (Neumeier and Brown, 2001). In addition, the records of Local Insurance Funds (*Ortskrankenkassen*) would present another source if they were preserved. By the early 1900s, these funds covered large shares of the labour force of most German cities. An unusual collection in the Munich City Archive that forms the core of the dataset used by Brown and Neumeier for their contribution to this volume includes extracts from the Munich local insurance fund for large numbers of recent migrants to the city for the decade prior to World War I. The records

permit the compilation of complete work histories for periods of seven to fifteen years. A key advantage of this source is the comprehensive coverage of all kinds of employment, including small firms and employers in the service sector. Since the archive has also preserved registration records that essentially function as a population register (see below), it is possible to reconstruct key information about the socio-economic background and approximate the income of many in their sample. Two disadvantages are the absence of information about the type of job with a particular employer and the high cost of linking firm names with other information on the sector of the firm.

The sources with the potential for providing the most comprehensive coverage of careers include records of vital registration maintained by churches or governmental authorities, censuses of population, and population registers. All of these sources have the potential to capture most of the population. Marriage registers provide a valuable source of information on the occupation of the groom (and often, his father) at a known date. As the contribution by Mitch illustrates, combined with other sources, for example information from census manuscripts, this kind of data can be used to identify the occupation (and place of residence) at two different points in the working life.

Census manuscripts offer another source for detailed information on occupation and other personal information of men and often, of women, that are useful for understanding influences on occupational choice (Wolfgang, 2001). Hall, McCaa, and Thorvaldsen (2000) provide an overview of the samples from historical census manuscripts that are currently available. Researchers must take account of the problems of under registration, particularly of women. Occupations for the head of a household are usually provided; the treatment of occupations by other members of the household, whether women or children, varies greatly. For the analysis of careers, it is necessary to link data on individuals from two or more censuses. Along with the classic studies by Thernstrom (1973), Landale and Guest (1990) and Long and Ferrie (2003) offer recent examples that study occupational mobility. Successful rates of linkage will be higher for more complex families, unusual names, and the geographically immobile (Galenson and Pope, 1989). Studies must account for these sample selection problems. Censuses often included questions on wealth, religion, home ownership and other forms of property, race, religion, and school attendance. When linked, census records offer the potential for both describing career paths and understanding determinants of careers.

Population registers have one important advantage over censuses: the nominal linkage of individuals has already been completed to provide longitudinal records. Brown, Guinnane, and Lupprian (1993) and Hall, McCaa, and Thorvaldsen (2000) offer surveys of population registers, which were maintained in Italy, Netherlands, Belgium, Scandinavia, and some German cities and states. Registers maintained lists of all residents of a locality, typically arranged by family group. If they are well maintained, they will provide updates of information on the family (births, deaths, marriages, and other types of data) for the period the family remains in the locality. They may also provide information on in- and out-migration. This also has its drawbacks. Population registers only exist for a few regions and then they appear rather late in time. They were not always continuously updated, nor were

changes necessarily dated. Following an individual who changes house often through the pages and volumes of the population registers can be a time consuming task.

In their chapter, Maas and Van Leeuwen draw upon the Demographic Data Base at the Umeå University in Sweden for data from the Sundsväl province of northern Sweden. The Demographic Data Base combines a marriage register, a birth register, a migration register, and an unusual source maintained in all Swedish parishes, the catechetical registers. The registers served as population registers for the local parish. For the period of their study (1800 to 1890), all of these sources have been linked and computerized, thus offering multiple records of occupation (in sequence) for many of the 42,000 men in the database. The authors are able to examine changes in occupation over fixed periods of time for the full population of the region. Similar to most population registers, the catechetical registers only state the occupation, not the firm where the person worked or the functional classification of the work performed within the firm.

Comparing occupations and occupational change over time and across various countries is very difficult, since it requires a single occupational grid that could be used to classify occupations that take on different names over time. The problem is compounded when occupational titles are expressed in different languages. A joint effort of researchers in many countries, the Historical International Standard Classification of Occupations, or HISCO in short, was created to address this problem. It is described in detail in Van Leeuwen, Maas and Miles (2002). With an emphasis on the nineteenth century, the data used to compile HISCO actually span the time period 1690-1970. The HISCO classification scheme follows the classifications of the International Standard Classification of Occupations (ISCO) of the International Labour Office of 1968. Linkage with the ISCO permits cross-referencing with contemporary data on occupations, which typically use the ISCO scheme.

This overview does not exhaust the list of potential resources for the study of careers. The two most obvious sources that have not received much attention to date include electoral lists and tax rolls. Electoral lists are lists of citizens who were deemed worthy to be elected or met particular income or property requirements for voting (see e.g. De Vries, 1986; Van Leeuwen and Maas, 1991; Brown, 1987). Although lists may be restricted to certain subgroups of the population who were typically wealthy, they have the advantage of uniformity and were often published. They will often note the financial position of an individual and less frequently his occupation. Tax rolls are less likely to be preserved by archives, but they could also provide information on income for the urban population. When matched with city directories that provide occupational information, they may offer insight into occupational and economic mobility. Neither of these sources will provide much additional information about the individual.

Volume Overview*Disciplinary and Methodological Perspectives*

The historical study of careers necessarily involves an organizing framework within which to define such key questions as the measurement of career patterns, the determinants of those patterns, the appropriate tools with which to explore causal relationships, and how to measure the outcomes of careers. The volume opens with two chapters discussing key contributions of contemporary economics and sociology to answering these questions. In chapter 2, Laura Owen highlights the application of economic models of skill formation, job attachment and turnover to the study of careers in history. She contrasts the implications of acquisition of skills specific to employment with a given firm that would tend to lead to a 'lifetime' job (defined as lasting at least 20 years) with skills general to many employers in an occupation or industry. Acquisition of general skills could encourage the worker to move between employers in order to diversify the range of work experiences and portfolio of skills. Owen offers the example of the U.S. teaching profession in the nineteenth and twentieth centuries as one in which general rather than firm-specific skills were acquired and surveys the literature on how school districts dealt with problems of high rates of teacher turnover during this period. She argues that the rise of mass-production methods in the late nineteenth and early twentieth centuries may have increased the importance of firm-specific skills in manufacturing in contrast with earlier apprenticeship in which contractual arrangements were made for the apprentice to bear the cost of training. She considers measures and determinants of worker tenure and turnover. The contribution concludes with an overview of the debates over when the importance of lifetime jobs in the United States increased over the period from the mid-nineteenth and mid-twentieth century and whether it has declined.

Chapter 3, by Ineke Maas, provides a summary of recent developments in the use of event history analysis of longitudinal patterns of individual work histories to explore themes developed by sociological analyses of careers. Also known as duration analysis, this approach shifts attention from the change in status or occupational mobility over an entire career to the individual career moves—changes in jobs or occupation—that constitute the key discrete events of a career.⁴ Event history analysis allows for an examination of the causal factors that affect the timing of these moves. The added explanatory power is gained at the cost of much more detailed information about individual's work history. An analysis of occupational changes would require information on all occupations between entering the labour market and the point in time being analysed. Such increased information requirements are a drawback in applying event history analysis to historical situations. The survey reviews some of the statistical models employed in event history analysis. Maas considers how these approaches and models can be used to analyse such basic issues in historical career studies as determining the

⁴ The contribution by Brown and Neumeier uses the related technique from the econometric literature to analyze the determinants of the duration of jobs for migrants to Munich.

influence on subsequent occupational change of individual characteristics such as education and prior work history, the influence of one's family and other significant relationships, the impact of macro characteristics such as trends in economic growth and economy-wide inequality and changes in occupational structure. She also explains how event history analysis can be used to address the problem of multiple time clocks, which involves disentangling the influence of age or experience and cohort effects.

The Creation of Formal Career Structures

This section offers chapters that describe the formal structures influencing careers that emerged after 1860 and some of the most important explanations for the emergence of those structures. The countries covered include Britain, Canada, the United States, and Argentina.

The contribution by Andrew Miles and Mike Savage in Chapter 4 on the development of career patterns at three large British employers is also informed by contemporary sociology. Their effort to explain the emergence of formal bureaucratic career structures at these firms towards the end of the nineteenth century draws upon several alternative explanations from the sociological literature on careers. Their discussion outlines the basic elements of a Weberian human capital model of careers that emphasizes the potential for the new structures to meet the growing requirements of bureaucracy and administration. It then sketches the surveillance perspective drawn from Foucault, which credits structured careers with achieving greater management control and power over workers. The cultural framing model emphasizes the role of cultural context. Finally, a social closure model focuses upon the hierarchical structure of the modern career, which may have facilitated stratification and the creation of barriers to mobility.

Their analysis challenges appeals to bureaucratic or economic rationality as the main reason behind the creation of career structures. Using detailed employment records from Lloyd's Bank, the Great Western Railway, and the British Post Office, they reconstruct career patterns for a large number of blue and white-collar workers. The records also include the careers of women. In all three organizations, they detect common phases in the development of the career: a period of foundation and growth in the second half of the nineteenth century, a period of consolidation during the first two decades of the twentieth century, and a period of crisis during the inter-war period. Detailed analysis of the job ladders that emerged within these organizations leads them to conclude that formal career structures hindered rather than prompted mobility across classes for men and mobility *tout court* for women. The barriers to upward mobility built into these career structures rose through the interwar years. The development of the modern career in the early decades of the twentieth century was primarily consistent with a process of social closure entailing the reinforcement of class and gender boundaries rather than a process of human capital formation.

Haia Shpayer-Makov's study of English police forces during an overlapping period in Chapter 5 describes the emergence of a career structure that seems to have been common for many organizations. From her perspective, the job ladder,

the procedures for promotions and the rewards for long tenure that eventually emerged in English police forces reflected an ongoing interaction of two forces. The employer sought desperately to diminish high turnover in an effort to reduce the costs associated with recruitment and to capture some of the benefits of stability for more effective functioning of the organization. The members of the police force sought upward mobility, job stability, and predictability in the pattern of promotions. Drawing upon the voluminous contemporary discussions of the issues facing the force, Shpayer-Makov traces the evolution of the terms of the implicit agreement reached by both sides. During the middle third of the nineteenth century, the Metropolitan London and provincial police forces began offering enhanced prospects of employment security and career advancement as well as welfare schemes involving provision of medical care and pensions in an effort to improve retention. Unlike in many other organizations, these benefits extended past middle and upper management to include the entire workforce. The police force created a career path that was a well-defined way to improve the social position and the pay of an officer. This career path was particularly attractive to those of working-class origins even if only a minority actually realized the fullest potential for promotion. As members of the force came to expect advancement, resentment grew when the expectations were not realised. In response, the police force created a 'horizontal path of advancement' based only on length of tenure, not on distinctive merit. The modern structure thus evolved as the result of the interplay of the narrow interests of the police and the rising expectations of those who benefited the most from the opportunities the new organization provided compared with alternative careers.

Chapters 6 and 7 examine the careers of workers in the mechanical and car repair shops of the railroad industry. This industry exemplifies the vertical management structure and bureaucratic organization that typify organized career structures. The contribution by MacKinnon on the Canadian Pacific Railway (chapter 6) explores the importance of the emerging bargaining relationship between the workers in the mechanical department, which was responsible for repair and maintenance of the equipment on the system, and the company's management. The Canadian Pacific Railway (CPR) was the largest single employer in Canada at the time, and its policies in many respects foreshadowed those of many Canadian employers later on. Two key episodes of crisis, the strike of 1908 and the unrest associated with the introduction of centralised wage bargaining between 1917 and 1922, were important for the establishment of mutual recognition between the trade unions and management. Conditions of the Canadian labour market, which on the surface would have favoured the railroad's initial resistance to unionisation, actually resulted in a more amicable agreement than would be reached by unions and the railroads in the United States. Although the railroad won the strike of 1908 with the use of replacement workers from Britain and the United States, it also learned that the British and American strikebreakers were less productive. The bargain that emerged resulted in a closed shop for the union (the CPR would only hire members of the union) and the acceptance of seniority as a key determinant of layoffs during downturns in business. Pensions and other benefits rewarded longevity with the firm. This resulted in a workforce

that over time 'aged'. The median age of the workers rose and the median employment tenure increased. Union policy essentially protected the career interests of the most senior members to the detriment of both the unemployed and those who had been with the railroad only a short time. Most opportunities for moving up the skill hierarchy in the CPR Mechanical department seem to have occurred during boom periods such as the First World War. MacKinnon also studies the episode over the period 1917 to 1922 of centralized wage bargaining and considers the tensions that arose as workers in the western part of the country lost their wage premium relative to the East. Mackinnon relates this to trends in age and skill level between the western and eastern regions. Over the thirty years of the study, the CPR shifted from primarily a confrontational approach to the unions to incorporating them into an internal labour market structure; union foremen dealt with worker grievances and addressed discipline problems. This shift in the approach of the CPR is consistent with Freeman and Medoff (1984), who argue that trade unions assist members in exercising voice in their relations with management.

In Chapter 7 Susan Hirsch and Janice Reiff look at a similar group of workers in the United States. They study the careers of skilled and unskilled men, black as well as white, who worked in three repair shops of the Pullman Company in the United States over the period 1915 to 1970. The American railroads contracted with the Pullman Company to provide, staff, and service sleeping cars for long distance passenger routes. The study covers the last period of expansion for the company during the 1920s, the period of crisis during the Great Depression and the rapid decline following 1945 as the development of airlines eliminated the profitability of virtually all long distance passenger service by rail. As was the case with the CPR, strikes at Pullman were defining moments in the history of careers at the company. They revealed the strategies of individual workers, their unions, shop managers, employers and the state. They also created contracts that attained a permanence that could only be broken up by a shock, such as a strike, major changes in the economy or war.

The period covered by the contribution reflects an ongoing struggle between the company and the union over the shape of the internal labour market. The craft unions sought the continuation of union control over the definition of jobs and qualifications for them. To the extent possible, workers hired by Pullman would have completed training in one of the traditional crafts. In an effort to take advantage of new technologies and also to secure control of the shop floor, the company sought to increase specialization by task. Unskilled workers would be hired and trained to perform a particular speciality. An important part of this strategy was hiring large numbers of African-American workers for whom the potential security of employment and higher wages at Pullman were highly prized when compared with other jobs on offer. The final compromise reached when union representation was re-established in the early 1930s reflected a blend of both approaches. Jobs were defined by craft, but unskilled workers could be brought into the company as helper-apprentices with prospects for advancement after they received sufficient training. As was the case with the CPR, layoffs were on the basis of seniority. Hirsch and Reiff emphasize one important feature of the system:

it created a clear trade-off between job security and advancement to a better position. Moving up the job ladder meant abandonment of accumulated seniority. Particularly during the Great Depression and then the period of general decline, the terms of this trade-off led to significant reductions in job turnover and mobility for older workers and particularly for African-American workers.

Maria Silvia Badoza's account of the typographical industry of Buenos Aires is presented in Chapter 8. Her contribution presents an overview of the main influences affecting working lives in the industry over the period 1880 to 1930 and then examines in much more detail the careers of workers at two of the largest printing shops over the first three decades of the twentieth century. The rapidly expanding printing sector, which grew sixteen-fold in employment over the period, constituted one of the few islands of skilled work and longer-term jobs in an economy dominated by the high turnover and mobility among occupations of the agricultural export sector. Even as the demand for printed matter and graphical products such as matchbooks expanded rapidly, technological change increased the scale of printing firms. Innovations in machinery substantially increased the volume of printing per press by the last quarter of the nineteenth century and created a bottleneck in the composition stage of production. Firms responded initially with new methods of payments for large numbers of less skilled workers. They eagerly took up the new composing machines of the early twentieth century, the linotype and monotype. Introduction of these semi-automatic machines held the potential of replacing the skilled work of the typographers, with their high levels of literacy and manual dexterity, with the semi-skilled work of operating machines. Typographers feared that the new technology could also result in the replacement of skilled male adult workers with young people or women. As is the case with other studies in Part I of the book, the development of career paths in this industry reflected the interplay among the printing companies eager to employ the newest technology, their search for appropriate management methods, the unions that won the right to represent all workers at the printing shops, and the self image of those workers. As a result of a successful strike in 1906, the union won two key rights. It gained the right to fill new openings in the print shops with workers of its choosing. The old typographers also won the 'first right' to become a linographer, or operator of the new machines. The typographers also accepted piece-rate wages (instead of time pay). This decision reflected their willingness to abandon the old model of career advancement in the industry, which had held out the hope of allowing them to eventually set up their own small printing shop. The system of union representation and control over entry into the industry lasted until the 1970s.

Badoza's examination of the career patterns of workers found in the extant personnel records of two Buenos Aires printing firms reveals the presence of a core labour force with a record of long-term attachment. The critical role the union played in the careers of typographical workers may have contributed to this apparent stability. Virtually all new hires secured their job on the basis of a recommendation from a current employee of the typographical firm or the union. Skilled workers who had been fired during a strike would often reappear in the firm's personnel records.

Gender and Careers

In the last quarter of the twentieth century, American and European courts and legislators have explicitly acknowledged the presence of discrimination against women in the workplace and have sought suitable remedies. The two chapters in this section of the volume focus on the historical roots of these restrictions in the case of two groups of middle- and upper-middle class women: the widows and single women of the late eighteenth and nineteenth centuries, and the graduates of an all-women's college of the University of Cambridge in the twentieth. They both offer insights into how the presence of social or economic discrimination can shape the career strategies of 'marginalised workers.'

Chapter 9 by Alison Kay examines one common strategy adopted by middle-class London women over the period 1761 through 1861: establishing a small business. Neither very poor nor of sufficient wealth to live independently, most of the women of her study were either single or had become widowed. Social norms of respectability were increasingly critical to maintaining middle class standing for these women, particularly by the second third of the nineteenth century. Kay employs literary sources such as contemporary vocational guides aimed at the young and autobiographies to map the boundaries of the occupations deemed acceptable for women who lacked the means to remain entirely within the domestic sphere. Her examination of this diverse evidence reveals the emergence of a clear differentiation according to gender of occupational and economic roles by the mid-nineteenth century. By that time, the socially preferred position of the middle class woman was at home. The process of differentiation had progressed so far that in the eyes of some reformers, the discovery that some middle-class women could not adhere to this norm because they lacked the means to support themselves was creating a crisis. The reformers responded by suggesting a short list of occupations that in their view were respectable, and then drawing up plans for training. Drawing upon this extended discussion among early Victorian contemporaries, some historians have argued that Victorian society was characterized by a 'separate spheres' model of gender roles that included a strict separation of home and workplace activities. Women would be confined to the domestic sphere.

Kay challenges this view. Drawing upon the records of the Sun Fire Insurance Office and census manuscript information, she points to a wider range of career choices available to women than has often been supposed. Proprietorship figured prominently in the career strategies of many middle class women, both those heading households and those who were married. Proprietorship offered an opportunity for women to be active in both the domestic sphere and the world of work. The small shop could be close enough to home to permit women to perform domestic duties and earn a livelihood. Ownership of a small business may have also required a lower initial investment of capital. Kay's discussion traces the main contours of female proprietorship over the period. Throughout, the types of businesses operated by women differed from those operated by men. The patterns reflect both the shift in social attitudes towards the role of women emphasized by the existing historiography and some long-term continuities that reflect the kinds of skills women were able to acquire. Although the proportion of insured businesses

owned by women fell, there were still a significant number of female-headed businesses at the height of the Victorian era. The range of sectors in which women operated businesses narrowed; the decline in importance of some sectors such as food, drink, and hospitality appears to reflect changing notions of respectability. At the same time, women generally opened businesses either in trades where women were also heavily employed (particularly in the needle trades) or where prior experience would have been of only modest value (stationery shops).

Pat Thane examines the careers of several generations of graduates of a women's college of the University of Cambridge (Girton College) in Chapter 10. Her study draws upon responses to questionnaires sent to women graduating from Girton over the period 1920 through 1990. She was able to conduct follow-up interviews with many of the respondents as well. Thane's study outlines basic changes in the contours of careers for these women and provides summaries of their own personal assessments of the outcome of their careers. Of particular significance for the broader themes of this volume, Thane's research reveals the value of a broad definition of the working life and of the career. Most graduates of Girton College were from middle-class backgrounds and thus could not rely on family fortunes for support after graduation. Since many Girtonians did not marry and since for those who did, the divorce rate rose over time, the labour market was important for many of them as a source of livelihood. For most, the primary occupation was initially teaching or secretarial work, although that proportion declined over time. New opportunities for these women in the formal labour market opened up only gradually due to such developments as the elimination of marriage bars, the dropping of barriers to the admission of women to the medical and legal professions and the reduction more generally of informal sex discrimination. When compared with male university graduates of a given cohort, the graduates of Girton had much more complex work histories; only a small share appear to have been able to enter the formal career structures that were so important for male employment and career advancement during the twentieth century. Compared with their male counterparts, these women changed employers more often.

Thane argues that these retrospective autobiographies offer a challenge to the traditional definition of the career. For virtually all of these well-educated women, marriage and child-bearing (and divorce) fundamentally shaped their lives. Prior to World War II, marriage generally meant the end of employment. Even after 1945, the birth of the first child meant withdrawal from the labour market for those in Thane's sample. For the most recent cohorts, balancing marriage, child-bearing, and a career in the formal labour market continues to pose substantial challenges. In addition to their work as homemaker and parent, many of these women served for years in the voluntary sector and rose to positions of considerable responsibility. Their university education was essential to their ability to make these (usually unremunerated) contributions to society. Thane's study offers a rare opportunity to directly assess the impact on personal well being of the careers it documents. Most women looked back upon their lives with satisfaction, but found that they could have had more fulfilling careers, and would have been happier, if husbands, employers and others would have been more co-operative and

supportive of their aspirations and had been more willing to recognise their talents and abilities. This holds even for women who did not marry or had no children. Thane argues that these women constituted an under-utilized resource for the British economy and society in which their careers transpired.

Economic Change and the Emergence of Informal Career Paths

Even in situations in which formal bureaucratic structures were absent, new forces emerged after 1850 that had important consequences for the course of working life histories in both Europe and the Americas. Even as industrialization spread to the European continent, the invasion of inexpensive grain from the Americas and Russia and innovations in farm technology prompted far-reaching changes in rural economies and societies. The resultant internal and overseas migration entailed major shifts of population from farm to factory and from countryside to the city. During the same period, modern bureaucracy became widespread in business and government. Rising levels of formal education and the introduction of examinations to test competence reshaped the contours of careers in the traditional professions of law and medicine as well as in the ever-growing government civil service. The contributions in the final section of the volume explore the consequences of these changes for various types of less formally structured careers.

In Chapter 11, Ineke Maas and Marco van Leeuwen examine intra-generational occupational mobility for the male working population of Sundsvall, a province of northern Sweden, during the nineteenth century. Their chapter draws on the Demographic Data Base at the Umeå University, which offers occupational information for about 42,000 male residents of the province at one or more points in their working lives. The experience of the Sundsvall province illustrates the dramatic impact industrial development and agricultural competition could have on career opportunities. As a centre of the rapidly growing lumber industry, Sundsvall experienced high rates of in-migration. From a tiny fraction in 1812, the share of migrants in the working population reached almost 40 percent by 1890, when their study ends. The creation of the lumber export industry during mid-century was followed by the development of large sawmills with specialized tasks. Employment opportunities, particularly for unskilled or semi-skilled workers, increased substantially. Employment on the farm, either as an agricultural labourer or as a farmer, fell by the middle of the century.

While the basic methodology of the study is in the tradition of occupational mobility research, their rich sources allow them to trace out more carefully than previously the association between trends in occupational mobility for an entire male population and the fundamental shifts in occupational structure associated with industrialization. The study examines patterns of occupational mobility at relatively short intervals (five years) for several age groups. This contrasts with the more usual study of inter-generational mobility, which typically includes only one observation for each working life. Most occupational mobility that they observe is 'lateral mobility', or movements within five hierarchically ranked groups of occupations. Overall, they observe an increase in lateral mobility and a decrease in upward and downward mobility over the period of their study. In addition, they

note that most occupational changes took place among younger workers. Even as the share of workers moving up from farm workers to farmers remained virtually constant, the development of sawmills and the influx of migrants substantially shifted the composition of the group of lowest-skilled workers away from agriculture. By the final period of analysis (the 1870s and 1880s), unskilled workers made up two-thirds of the lowest occupational grouping, which compared with one-third during the first half of the century. The likelihood of upward mobility fell for this group as well. The result was a decline in overall mobility for the lowest group of workers.

Chapter 12 by John Brown and Gerhard Neumeier on migrants to Munich examines another influence on informal careers, the role of job shopping in acquiring industry-specific skills and in enhancing long-term career prospects. Contemporaries held two opposing views of the high frequency with which workers changed employers and the corresponding small share of long-term jobs apparent in late nineteenth and early twentieth century America and Europe. Some argued that work histories reflected a general lack of attention or inability to structure the working life; that careers were a 'completely careerless career' to use Vincent's (1993, p. 219) terminology. Other accounts of high rates of job turnover suggest that a given worker acquired on-the-job experience in a variety of jobs as part of a strategy to acquire 'industry-specific' skills and that this contributed to the development of working class careers. The contribution examines these issues by drawing upon evidence available for ten or twelve years of the working lives of migrants to Munich during the late nineteenth and early twentieth centuries, a period when Bavaria was experiencing basic transformations of its rural and urban economies. A large share of the Munich labour force consisted of migrants who primarily came from small villages or towns. For most, the move to Munich involved a change of occupation as well as of residence. Even those who continued the occupation they had practiced or for which they were trained in their hometown most likely confronted technologies and a labour market that was vastly different in Munich, which was a town of 400,000.

The study examines the pattern of job moves within the work histories of Munich migrants to determine whether job-to-job mobility was consistent with the acquisition of industry-specific skills. It employs duration analysis, which is a statistical technique similar to event history analysis. It finds that workers acquired skills by switching jobs as long as this took place within an industry. In addition, other sources permit a closer look at whether a stable employment pattern within an industry and the acquisition of industry-specific skills increased socio-economic mobility. Measures of inter-generational mobility suggest that mobility rose with the accumulation of industry-specific skills, even for workers initially in skilled occupations. Migrants who maintained employment within the same industry experience higher rates of income growth as well as higher rates of upward inter-generational mobility.

Chapter 13 by David Mitch looks at a large occupational group generally not associated with the rise of the career: Victorian and Edwardian English farm labourers. It does so for Norfolk during Victorian times, by looking at the careers of a group of farm workers reconstructed by linking their marriage records to

censuses. It also looks at sets of weekly farm labour accounts for one farm with a long run of labour account books, essentially providing weekly payroll information. Farm workers in mid-career, roughly in their late thirties and early forties, were disproportionately recruited from those whose fathers had been farm labourers and who had been labourers at marriage. This suggests that farm work was a distinctive way of life not readily open to outsiders. Geographical migration and persistence patterns provide further evidence on the degree of isolation of farm workers. A substantial proportion of those in the sample who were married in a given parish had been born there and was still present ten years later at time of the census.

Two indicators of whether a career in the conventional sense of advance and promotion was possible for farm workers include rates of upward occupational mobility within agriculture to more skilled and managerial positions and the age-earnings profile for those who remained as farm workers. Roughly 60 percent to two thirds of those who had been labourers at marriage were also agricultural labourers roughly ten years later as recorded in census records. This implies substantial amounts of both occupational continuity and mobility for this group. For those who were mobile, the most common destination was into the non-agriculture sector, but at least one-third of those who were upwardly mobile moved to positions within agriculture. Moreover, the rate of upward mobility within agriculture rose over time despite the shrinkage of the agricultural sector within Norfolk and, as might be expected, it rose with age. Wage-age profiles for farm workers were generally flat during the prime adult years, but they did rise markedly during adolescence. They also shifted upward during World War I. Mitch argues that these patterns suggest the absence of on-going skill accumulation or the use of wage-incentives to promote long-term tenure. Macroeconomic conditions were most important for wage trends.

For the mid-Victorian period, the Eastern English agricultural labour market has been characterized as subject to considerable transiency with frequent movement from farm to farm. Farm labour books for a Norfolk farm confirm this characterization for the 1860s. The labour books also suggest the need to distinguish between the regularity of employment and the length of overall job attachment. The regularity of employment appears to have risen dramatically over the nearly eighty years covered by the account books, with most workers employed at the end of the period working continuously full-time throughout the farm year. However, the length of overall attachment, which is defined as the length of time over which a worker appeared on the account books, showed no such upward trend. It was roughly the same at the beginning of the period spanned by the account books as at the end. Despite a non-bureaucratic hiring structure, changes in employment relationships with the shrinkage of both labour supply and alternative employment in the region along with possible changes in farm practise following the onset of the First World War seem to have contributed to the rise in employment stability observed in the case study farm. Thus, with rising regularity of employment farm work became more of a career as conventionally defined.

In Chapter 14, Paolo Raspadori provides an account of two different paths for structuring the careers of workers of the Italian steelmaker, Saffat, which

specialized in production for military purposes. His study covers the first three decades of the twentieth century. Out of a desire to protect the mill from potential attack, it was sited in Terni, a town located in an isolated rural part of Umbria that was several hundred kilometres away from Italy's industrial heartland. At the same time, the steel mill demanded two quite different kinds of worker. The rural location meant that Saffat placed a premium on skilled and semi-skilled employees. The company responded with the development of an internal labour market that included opportunities for training and advancement for a minority of workers. Periodic booms in production and large-scale construction projects created temporary increases in the demand for unskilled workers. In addition, the structure of production also offered employment for unskilled workers.

The study reconstructs the careers of these two groups of workers by looking more closely at long-term employees (those with a tenure of twenty years or more) and short-term workers employed about one year or less. Surprisingly, the core consisted in large part of unskilled and semi-skilled persons in addition to those possessing skills essential to the production process, many of the short- and long-term employees from the period before World War I could be traced to the subsequent census of 1921. The cadastral records of the communities they resided in offered detail on their holdings of land, if any. Linking these records allowed Raspadori to look at the subsequent occupation of the short-term employees. He concludes that the short-term workers survived from a mix of subsequent factory work, other jobs, and the proceeds of a plot of land typically owned jointly with several others. For both long- and short-term workers, migration was incomplete. Many long-term employees continued to hold on to a small plot of land and large numbers of workers maintained their residence in rural villages outside of Terni, even though for many it required a lengthy commute by cycle or foot. This pattern of flexible employment, as workers moved between the city and the countryside, and between the factory and farm, was apparently found in other parts of rural Italy. It reflects the accommodation of informal careers to new patterns of employment and opportunities.

Robin Mackie and Gerrylynn Roberts in Chapter 15 examine career patterns among British chemists during the period 1887 to 1956. The chemists offer an outstanding example of a growing group of knowledge-based professionals. The contribution divides the chemists into cohorts entering the profession in three periods: prior to the First World War, during the interwar years, and during and after World War II. The analysis examines the interplay of stability within a particular sector (independent, academic, government, industry) and within positions across these three cohorts. An important strength of the individual biographies that they have assembled is the ability to rank the responsibility of the positions held by chemists. This allows them to explore the links between career paths and upward mobility ('success'). On the face of it, chemists would appear to fit into the category proposed by Vincent of a 'professional career' based on 'non-hierarchical exploitation of specific craft or skill' (Vincent, 1993, p.224). Their research casts doubt on the value of this characterization for understanding the course of professional careers. Although the expertise was a critical contribution to

entry into the career, the patterns of careers that they have identified suggest considerable diversity; other influences were also critical in shaping careers.

Over the period of their study, several important trends emerge that reflect on the dynamics of career paths. First, as a newly emerging profession, chemists sought to pattern their careers on the example of lawyers and physicians. An important source of employment for chemists entering the field prior to the First World War was consultancy. By the interwar years, the dominance of industry emerged and consultancy virtually disappeared. Consistent with a Chandlerian and Weberian perspective, a career that included long-term employment with one employer had become the dominant pattern for chemists in industry, even as it diminished in importance for those employed in government. This pattern changed dramatically during and after the Second World War. Mobility across sectors diminished to the extent that the mobile one-half of chemists now worked in a smaller number of sectors, but mobility across firms increased substantially. The analysis of rates of upward mobility across the three cohorts reveals an increase in the success rates of the stable career, particularly during the interwar years. For the final cohort, success in the career was more likely when the chemist moved among different firms.

Implications and Conclusions

The contributions to this volume raise a number of basic issues about writing the history of 'modern' careers and about the contemporary institutions and practices that have shaped them. The essays of Part One offer insights into the history of formal career structures found within the firm or governmental organizations. The essays offer insight into when internal labour markets emerged, the reasons for their emergence, and some long-term consequences. Historians of North American internal labour markets have dated their rise to the first three or four decades of the twentieth century as a consequence of the rise of the personnel management movement, the spread of unionization and government-mandated labour practices (Jacoby, 1984; Doeringer and Piore, 1985). Although the two North American studies of firms in the railway industry by MacKinnon and Hirsch and Reiff as well as Badoza's study of printing firms in Argentina roughly confirm this chronology, other studies do not. Shpayer-Makov and Miles and Savage trace the emergence of internal labour markets in England during the last third of the nineteenth century. Raspadori's case study of an Italian steel firm suggests elements of an internal labour market were present by 1900.

Understanding why internal labour markets emerged has a critical bearing on the chronology. The studies by MacKinnon, Hirsch and Reiff, and Badoza offer some support for the emphasis in the literature on union-management interactions (Jacoby, 1984; Elbaum, 1984). It is also apparent that the ability of unions to influence labour contracts depends upon a variety of factors related to overall labour market conditions and features of the technology in use and markets. The closer look at the careers of workers provided by these three studies highlights the emerging trade-off between job security and promotion opportunities. The studies

by Shpayer-Makov and Raspadori underscore the importance of external labour market conditions and the problems posed by high turnover as key influences on the decisions of firms to create internal labour markets. Miles and Savage see the creation of internal labour markets as a means to differentiate workers by status and sex, a point that has some resonance in Badoza's study as well.

Finally, all of the studies in Part One suggest that the institution of internal labour market structures creates strong internal advocates for maintaining them, even after the original impetus for their introduction has disappeared. This is illustrated by the patterns of task specialization and job assignment and the tradeoffs between promotion and job security that emerged for the Pullman workers described by Hirsch and Reiff. Badoza notes that the detailed and rigid training process along with schedules of wages and tariffs endured for Buenos Aires typographers for over six decades after the 1906 strike that brought them about. Similar issues arise with the emergence of social closure in the bureaucratic structures considered by Miles and Savage. The "horizontal" promotion ladders for English police reported by Shpayer-Makov became a focus of heated debate by both management and the police force. In the extreme, these labour policies have the potential to become dysfunctional and impede labour market flexibility.

The essays in Parts Two and Three highlight the diversity of 'informal' career paths. They also identify some common influences that shaped those paths: prior education or training, social barriers, and the economic transformation of the last part of the nineteenth and first part of the twentieth century. These investigations reveal the presence of 'patterned sequences' of occupations, jobs, and work outside of the market that for the most part fall outside of existing typologies (Vincent, 1993). Consider the 'meandering' or 'fractured' careers presented in two chapters of the volume. Many of the college-educated women who are the focus of Thane's contribution moved from teaching positions into full-time motherhood and then into the voluntary sector or paid employment. The working lives of the occasional steelworkers—many of who were illiterate—that Raspadori examines also appear to meander between the factory floor and rural farmstead. Although the extent to which the jobs taken or occupations followed reflect 'choice' may be debated, it is clear that the sequences revealed an understandable and logical response to prevailing social and economic circumstances. The diversity among these contributions suggests a fundamental area for further research in the history of careers: mapping out trends in lifetime profiles in various historical contexts. This entails describing and analyzing the career as a whole as discussed in Abbott (1990). Applying this approach to representative historical populations would help ascertain long-term trends in the mix of formal versus informal career paths across cohorts. It would also help identify shifts across different types of career structures.

The contributions reveal a subtle interplay between education and training—or the lack of it—and career development. The *absence* of formal training was a key influence on the choice of middle class Victorian women to go into small business. Once Saffat had developed its own system of sorting out and training workers, the lack of skills of residents of the surrounding rural areas could be turned to its own advantage. Formal education or training did not always preordain a particular career path. It opened up the teaching profession to large numbers of graduates of

Girton College, but until other social and economic barriers were removed, it offered full benefits only to the small minority of women who were able to overcome those barriers. The extensive technical training required for chemists—and membership in the appropriate professional organization—opened up a wide range of career paths within particular organizations or across sectors and positions. Finally, for many of the working lives discussed here, on-the-job experience, whether in a Munich bakery or on a Norfolk farm, appears to have been a crucial influence on the acquisition of skills or on the establishment of long-term working relationships. A key issue arises for understanding the development of careers in our own time. How have the spread of formal training and education and the imposition of formal requirements for entry into a wide range of occupations during the twentieth century influenced the flexibility of individuals to respond to new opportunities and the ability of economic institutions to respond to technological and social change?

The contributions also reveal how important discrimination on the basis of sex or race was for career paths. Discrimination took the most blatant form of legal or informal barriers to entering certain occupations or positions of authority, and the consequences of these barriers are clearly outlined in the contributions by Kay and Thane. More subtle influences were also present. Seniority rules and the condition of the external labour market clearly placed African-American workers of Pullman, a company in a declining industry, at a disadvantage relative to their white counterparts. It also had the unexpected effect of providing the British voluntary sector with talented and highly motivated leadership.

Finally, the great economic and social transformation of the second half of the nineteenth century and first part of the twentieth century—industrial development in tandem with agricultural decline—had a profound influence on career paths. It opened up new opportunities for millions of migrants and emigrants to reshape their working lives outside of the geographic and occupational boundaries that formed the careers of their fathers and mothers. The changes in occupation tracked by Maas and van Leeuwen and the success experienced by migrants to Munich who may have taken on an entirely new line of work underscore the value of mobility in permitting these individuals to adapt to sweeping change. The existence of intermediate solutions such as those of the rural residents of the district of Terni underscore the importance of security and the value of maintaining social ties in many societies. These cases raise the question of whether contemporary societies offer the same scope for occupational or geographic mobility in the face of economic and social change.

These twelve case studies suggest one important lesson. Although formal and informal career paths may ‘create’ careers, they are also the outcome of distinct historical circumstances and the ingenuity and resourcefulness of individuals in the past. Current debates about the future of the ‘modern career’ would benefit from a fuller understanding of this history.

References

- Abbott, A. (1990), 'Conceptions of Time and Events in Social Science Methods,' *Historical Methods*, 23, pp.140-150.
- Ago, R. (1992), 'Ecclesiastical careers and the destiny of cadets', *Continuity and Change*, 7, pp. 271-282.
- Akerlof, G.A. and Yelen, J.L. eds. (1986), *Efficiency wage models of the labor market*, Cambridge, Cambridge University Press.
- Alber, J. (1981), 'Government responses to the challenge of unemployment: the development of unemployment insurance in western Europe', chapter 5, in P. Flora and A.J. Heidenheimer, *The development of welfare states in Europe and America*, London 1981.
- Arthur, M., Hall, D. and Lawrence, B. (1989), 'Generating new directions in career theory: the case for a transdisciplinary approach', in Michael B. Arthur, Douglas T. Hall, and Barbara S. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 7-25.
- Barley, S. (1989), 'Careers, identities, and institutions: the legacy of the Chicago School of Sociology', in M. Arthur, D. Hall, and B. S. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 41-65.
- Barney, J. and Lawrence, B. (1989), 'Pin stripes, power ties, and personal relationships: the economics of career strategy', in M. Arthur, D. Hall, and B. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 417-436.
- Becker, G. (1964), *Human Capital. A Theoretical and Empirical Analysis with Special Reference to Education*, Chicago, University of Chicago Press.
- Benadusi, G. (1994), 'Career strategies in early modern Tuscany: the emergency of a regional elite', *Sixteenth Century Journal*, 25, pp. 85-99.
- Bennett, L. (1986), 'Job Classification And Women Workers: Institutional Practices, Technological Change And The Conciliation And Arbitration System, 1907-72', *Labour History*, Australia, 51, pp. 11-23.
- Betz, N., Fitzgerald, L. and Hill, R. (1989), 'Trait-factor theories: traditional cornerstone of career theory', in M. Arthur, D. Hall, and B. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 26-40.
- Boyer, G. (1988), 'What did unions do in nineteenth-century Britain?' *Journal of Economic History*, 48, pp. 319-32.
- Brown, J. (1987), 'Reforming the Urban Environment: Sanitation, Housing, and Government Intervention in Germany, 1870-1910', Ph. D dissertation, University of Michigan.
- Brown, J., Guinnane, T. and Lupprian, M. (1993), 'The Munich Polizeimeldebogen as a source for Quantitative History', *Historical Methods*, 26, pp. 101-124.
- Brown, J. and Neumeier, G. (2001), 'Job Tenure and Labor Market Dynamics during High Industrialization: the Case of Germany before World War I', *European Review of Economic History*, 5, pp. 189-217.
- Bruijn, J. (2001), 'Het zeevarend kader van de marine en de VOC in de achttiende eeuw', in J. Parmentier, S. Spanoghe eds. *Orbis in Orbem*, pp. 91-108.
- Burkholder, M. (1998), *Administrators of Empire*, Aldershot, Ashgate.
- Burnett, J., Vincent, D. and Mayall, D. eds. (1984-1989), *The Autobiography of the Working Class: An Annotated Critical Bibliography*, 3 vols, New York, New York University Press.
- Cairncross, A. (1949), 'Internal Migration in Victorian England', *Manchester School*, 17, pp. 67-87.

- Chandler, A. (1977), *The Visible Hand. The Managerial Revolution in American Business*, Cambridge, MA, Harvard University Press.
- Chandler, A. (1988), *The Essential Alfred Chandler. Essays Toward a Historical Theory of Big Business*, edited by T. McGraw, Boston, MA, Harvard Business School Press.
- Chandler, A. (1990), *Scale and Scope: The Dynamics of Industrial Capitalism*, Cambridge, MA, Harvard University Press.
- Cytrynbaum, S. and Crites, J. (1989), 'The utility of adult development theory in understanding career adjustment process', in M. Arthur, D. Hall, and B. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 66-88.
- Dalton, G. (1989), 'Developmental views of careers in organizations', in M. Arthur, D. Hall, and B. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 89-109.
- Doeringer, P. and Piore, M. (1971), *Internal Labor Markets and Manpower Analysis*, Lexington, MA, D.C. Heath.
- Doeringer, P. and Piore, M. (1985), *Internal Labor Markets and Manpower Analysis. With a New Introduction*, London, M.E. Sharpe.
- Eggertsson, T. (1990), *Economic Behavior and Institutions*, Cambridge, Cambridge University Press.
- Elbaum, B. (1984), 'The Making and Shaping of Job and Pay Structures in the Iron and Steel Industry', in P. Osterman ed. *Internal Labor Markets*, Cambridge, MA, the M.I.T. Press.
- Epstein, S. (1998), 'Craft Guilds, Apprenticeship, and Technological Change in Preindustrial Europe', *Journal of Economic History*, 58, pp. 684-713.
- Ferrie, J. and Long, J. (2002), 'Tale of Two Labor Markets: Career Mobility in the U.K. (1851-81) and U.S. (1850-80)', paper presented at the 13th International Economic History Congress, Buenos Aires.
- Form, W. (1968), 'Occupations and Careers', *International Encyclopedia of the Social Sciences*, 11, pp. 245-254.
- Freeman, R. and Medoff, J. (1984), *What do Unions Do?* New York, Basic Books.
- Galenson, D. and Pope, C. (1989), 'Economic and Geographic Mobility on the Farming Frontier: Evidence from Appanoose County, Iowa, 1850-1970', *Journal of Economic History*, 49, pp. 635-655.
- Galenson, D. (1991), 'Economic Opportunity on the Urban Frontier: Nativity, Work, and Wealth in Early Chicago', *Journal of Economic History*, 51, pp. 581-603.
- Goldin, C. (1990), *Understanding the Gender Gap: An Economic History of American Women*, New York, Oxford University Press.
- Goldin, C. (2001), 'The Human Capital Century and American Leadership: Virtues of the Past', *Journal of Economic History*, 61, pp. 263-292.
- Hall, P., McCaa, R. and Thorvaldsen, G. eds. (2000), *Handbook of International Historical Microdata for Population Research*, Minneapolis, Minnesota Population Center.
- Hansen, H. (1997), 'Caps and Gowns: Historical Reflections on the Institutions that shaped learning for and at work in Germany and the United States 1800-1945', unpublished PhD dissertation, Department of History, University of Wisconsin.
- Hechter, M. (1988), *Principles of Group Solidarity*, Berkeley, University of California Press.
- Hershberg, T. (1981), 'The New Urban History: Toward an Interdisciplinary History of the City', in T. Hershberg ed. *Philadelphia: work, space, family, and group experience in the nineteenth century*, New York, Oxford University Press, pp. 3-35.
- Inkeles, A. (1960), 'Industrial man: the relation of status to experience, perception and values', *American Journal of Sociology*, 66, p. 29

- Jacoby, S. (1984), 'The Development of Internal Labor Markets in American Manufacturing Firms', in P. Osterman ed. *Internal Labor Markets*, Cambridge, MA, M.I.T. Press, pp.23-69.
- Jacoby, S. (1985), *Employing Bureaucracy: managers, unions, and the transformation of work in American industry, 1900-1945*, New York, Columbia University Press.
- Jacoby, S. and Sharma, S. (1992), 'Employment duration and industrial labor mobility in the United States, 1880-1980', *Journal of Economic History*, 52, pp. 161-179.
- Kaelble, H. (1986), *Social Mobility in the Nineteenth and Twentieth Centuries: Europe and America in Comparative Perspective*, New York, St. Martin's Press.
- Kanter, R. (1989), 'Careers and the wealth of nations: a macro-perspective on the structure and implications of career forms', in M. Arthur, D. Hall, and B. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 506-521.
- Kerr, C. et al (1973), *Industrialism and industrial man*, New York and Oxford, Oxford University Press, [first published 1960], pp. 41-56, 97, 106-107, 175.
- Kocka, J. (2001), 'How can one make labour history interesting again?' *European Review*, 9, pp. 201-212.
- Ku, H-T. (1984), 'Upward career mobility patterns of high-ranking officials in ch'ing China, 1730-1906', *Papers on Far Eastern History*, 29, pp. 45-66.
- Lancashire, R. (1971), 'Occupational Choice Theory and Occupational Guidance Practice', in P. Warr ed. *Psychology at Work*, Harmondsworth, Penguin Books Ltd., pp. 194-207.
- Landale, N., and Guest, A. (1990), 'Generation, ethnicity, and occupational opportunity in late 19th century America', *American Sociological Review*, 55, pp. 280-296.
- Landes, D. (1969), *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present*, Cambridge, Cambridge University Press.
- Lazear, E. (1999), 'Personnel Economics: Past Lessons and Future Directions', *Journal of Labor Economics*, 17, pp. 199-236.
- Leeuwen, M.H.D. van (1997a), 'Collective Agreements, Unions and Welfare in the Netherlands, 1910-1960', in A. Knotter et al eds. *Labour, Social Policy and the Welfare State*, IISG, Amsterdam, pp. 73-82.
- Leeuwen, M.H.D. van (1997b), 'Trade Unions and the Provision of Welfare in the Netherlands 1910-1960', *Economic History Review*, pp. 764-791.
- Lynch, K. (1998), 'Old and New Research in Historical Patterns of Social Mobility', *Historical Methods*, 31, pp. 93-98
- Leeuwen, M.H.D. van and Maas, I. (1991), 'Log-linear Analysis of Changes in Mobility Patterns. Some Models with an Application to the Amsterdam Upper Classes in the Second half of the Nineteenth Century', *Historical Methods*, 24, pp. 66-79.
- Leeuwen, M.H.D. van and Maas, I. (1996), 'Long Term Social Mobility: Research Agenda and a Case Study (Berlin, 1825-1957)', *Continuity and Change*, 11, pp. 399-433
- Leeuwen, M.H.D. van, Maas, I. and Miles, A. (2002), *HISCO: Historical International Standard Classification of Occupations*, Leuven, Leuven University Press.
- Lesger, C. (2001), *Handel in Amsterdam ten tijde van de Opstand. Kooplieden, commerciële expansie en verandering in de ruimtelijke economie van de Nederlanden, ca. 1500-1630*, Uitgeverij Verloren, Hilversum .
- Lieven, D. (1984), 'The Russian ruling elite under Nicholas II: career patterns', *Cahiers du Monde Russe et Soviétique*, 25 pp. 429-454.
- Linden, M. van der (2001), 'Global Labor History and 'the Modern World-System': Thoughts at the Twenty-Fifth Anniversary of the Fernand Braudel Center', *International Review of Social History*, 46, pp. 423-459
- Lucassen, J. (2000), 'In Search of Work in Europe, 1800-2000', *IISH Research Papers*, 39, Amsterdam.

- Lundgreen, P. (1988), 'Wissen und Bürgertum: Skizze eines historischen Vergleichs zwischen Preußen/Deutschland, Frankreich, England, und den USA', in Siegrist, H., ed. *Bürgerliche Berufe: Zur Sozialgeschichte der freien und akademischen Berufe im internationalen Vergleich*, Göttingen, Vandenhoeck and Ruprecht, pp. 106-124.
- Maas, I. and Leeuwen, M.H.D. van (2002), 'Industrialization and intergenerational mobility in Sweden *Acta Sociologica*, 45, pp. 179-194.
- Marshall, G. (1998), *The Dictionary of Sociology*, Oxford, Oxford University Press.
- Nicholson, N. and West, M. (1989), 'Transitions, work histories, and careers', in M. Arthur, D. Hall, and B. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 181-201.
- Nipperdey, T. (1993), *Deutsche Geschichte 1866-1918*, 1, Arbeitswelt und Bürgergeist. Munich, Verlag C.H.Beck.
- North, D. (1990), *Institutions, Institutional Change, and Economic Performance*, Cambridge, Cambridge University Press.
- Oosterhuis, G. (1993), *Promotie. Een empirisch onderzoek naar de loopbanen van marineofficieren in de twintigste eeuw*.
- O'Rourke, K. and Williamson, J. (1999), *Globalization and History: The Evolution of the Nineteenth-Century Atlantic Economy*, Cambridge, MA, M.I.T. Press.
- Osterman, P. (1984), 'Introduction: The Nature and Importance of Internal Labor Markets', in P. Osterman ed. *Internal Labor Markets*, Cambridge, MA, M.I.T. Press, pp. 1-22.
- Owen, L. (1995), 'Worker Turnover in the 1920's: The Role of Changing Employment Policies', *Industrial and Corporate Change*, 4, pp. 499-530.
- Penn, R. (1985), *Skilled Workers in the Class Structure*, Cambridge, Cambridge University Press.
- Prandy, K. and Bottero, W. (2000), 'Reproduction within and between generations: the example of nineteenth-century Britain', *Historical Methods*, 33, pp. 4-15.
- Requate, J. (1995), *Journalismus als Beruf: Entstehung und Entwicklung des Journalistenberufs im 19. Jahrhundert: Deutschland im internationalen Vergleich*, Göttingen, Vandenhoeck und Ruprecht.
- Riley, J. (1989), *Sickness, recovery and death: a history and forecast of ill health*, Houndmills, Basingstoke, Hampshire, MacMillan.
- Riley, J. (1997), *Sick not dead. The health of British workingmen during the mortality decline*, Baltimore, Johns Hopkins University Press.
- Riley, J. (1987), 'Sickness in an early modern workplace', *Continuity and Change*, 2, pp. 362-385.
- Rosenbaum, J. (1989), 'Organization career systems and employee misperceptions', in M. Arthur, D. Hall, and B. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 329-353.
- Rowntree S. (1922), *Poverty. A study of Town Life*, London, Longmans, Green, and Co. (1901).
- Schaeffer, H. (1981), 'Arbeitsverdienst im Lebenszyklus', *Zur Einkommensmobilität von Arbeitern Archiv für Sozialgeschichte*, 21, pp. 237-267.
- Schouwenburg, K.L. van (1988), 'Het personeel op de schepen van de Kamer Delft' der VOC in de eerste helft der achttiende eeuw', *Tijdschrift voor Zeegechiedenis*, 7, pp. 76-93.
- Seltzer, A. and Simons, K. (2001), 'Salaries and career opportunities in the banking industry: evidence from the personnel records of the Union Bank of Australia', *Explorations in Economic History*, 38, pp. 195-224.
- Sicherman, N. and Galor, O. (1990), 'A Theory of Career Mobility', *Journal of Political Economy*, 98, pp. 169-192.

- Siegrist, H. (1988), 'Bürgerliche Berufe: Die Professionen und das Bürgertum', in Siegrist, H., ed. *Bürgerliche Berufe: Zur Sozialgeschichte der freien und akademischen Berufe im internationalen Vergleich*, Göttingen, Vandenhoeck and Ruprecht, pp. 11-48.
- Simon, O. (1902), *Die Fachbildung des Preussischen Gewerbe- und Handelssyndikats im 18. Und 19. Jahrhundert*, 1, reprint with a forward by W. Just. Cologne: Bohlau Verlag.
- Sobek, M. (2001), 'U.S. Historical Statistics. New Statistics on the U.S. Labor Force, 1850-1990, Historical Methods', *A Journal of quantitative and Interdisciplinary History*, 34, pp. 71-87.
- Sørensen, A.B. (2000), 'Toward a Sounder Basis for Class Analysis', *American Journal of Sociology*, 105, pp. 1523-1558.
- Stovel, K., Savage, M. and Bearman, P. (1996), 'Ascription into achievement models of career systems at Lloyds Bank, 1890-1970', *American Journal of Sociology*, 102, pp. 358-399.
- Strieter, T. W. (1990/1991), 'The 'old grumblers' of Napoleon's army: rates of promotion before and after 1815', *Historian*, 53, pp. 63-76.
- Sundstrom, W. (1988), 'Internal Labor Markets before World War I: On-the-Job Training and Employee Promotion', *Explorations in Economic History*, 25, pp. 424-445.
- Thernstrom, S. (1973), *The other Bostonians: poverty and progress in the American metropolis*, Cambridge, MA, Harvard University Press.
- Thomas, R. (1989), 'Blue-collar careers: meaning and choice in a world of constraints', in M. Arthur, D. Hall, and B. Lawrence eds. *Handbook of Career Theory*, Cambridge, Cambridge University Press, pp. 354-379.
- Van Maanen, J. (1977), 'Introduction: The Promise of Career Studies', in J. Van Maanen editor *Organizational Careers: Some New Perspectives*, London, John Wiley & Sons, pp. 1-12.
- Vincent, D. (1993), 'Mobility, bureaucracy and careers in early-twentieth-century Britain', chapter 11, in A Miles and D. Vincent eds. *Building European Society. Occupational change and social mobility in Europe 1840-1940 Manchester*, Manchester UP, pp. 217-239.
- Vincent, D. (2000), *The rise of Mass Literacy. Reading and writing in modern Europe*, Oxford, Polity Press.
- Vries, B. de (1986), *Electoraat en elite, Sociale structuur en sociale mobiliteit in Amsterdam, 1850-1895*, Amsterdam, de Bataafsche Leeuw.
- Weber, M. (1978), 'Bureaucracy', *Economy and Society*, 2, edited by Guenther Roth and Claus Wittich, Chapter 11, Berkeley, University of California Press
- Whiteside, N. (1979), 'Welfare insurance and casual labour: A study of administrative intervention in industrial employment 1906-1926', *Economic History Review*, 2nd. ser., 32, pp. 507-22.
- Wildt, J.H. de (1986), 'Wachtgeldregelingen in het particuliere bedrijfsleven in de eerste helft van deze eeuw', *Sociaal Maandblad Arbeid*, 41, pp. 452-468.
- Wolfgang, F. (2001), 'Historie der amtlichen Statistiken der Erwerbstätigkeit in Deutschland. Ein fragmentarischer Abriss: Darstellung, Quellen, Daten, Definitionen, Chronik', *Historische Sozialforschung*, Supplement 13.
- Yankow, J. (2003), 'Migration, Job Change, and Wage Growth: A New Perspective on the Pecuniary Return to Geographic Mobility', *Journal of Regional Science*, 43, pp. 483-516.