Career Patterns of Executive Women in Finance: An Optimal Matching Analysis[1]

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This article examines the objective and subjective facets of female finance-executive careers. Optimal matching and qualitative analyses are used to show how the careers are shaped by workplace structures and by the early 1970s enforcement of women's employment rights. Changing opportunity structures in turn shaped respondents' perspectives. Many younger respondents were unaware that their mobility was partly due to the creative action of their female predecessors and took personal credit for their own rapid progress. Finally, it appears that as women have experienced more freedom in pursuing finance careers, their career trajectories have become more rigid.

INTRODUCTION

The popular press often reports that successful women in male-dominated occupations have followed unusual career paths marked by flukes and accidents (e.g., Deutsch 1996; Thomas 1995). Trade publications make similar claims. For example, *CFO* magazine reports that most of the female chief financial officers it interviewed "prefaced their career history with the comment,'I did something unusual'" (Walbert 1995, p. 36). To the extent that women's careers in male-dominated fields are now more regular, popular accounts assume that change to have been a gradual de-

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velopment brought on through years of political pressure from organized lobbies. Yet we know little about what these careers actually look like.

This article studies the complete, intact careers of female finance executives in the context of their shared labor market history. Despite the surge of women entering management over the past 35 years, women constitute less than 5% of senior executives (U.S. Department of Labor 1995). Women who have reached senior management levels represent one end of the distribution of employed women. As an extreme case, executive women highlight social processes that may affect other employed women more subtly. My respondents are predominantly white, upper middle class, and rich in human capital: they were well positioned to take advantage of legal and social changes affecting women's place in society.

In studying these careers, I have three central empirical concerns. First, are there distinct patterned trajectories in careers or, as many of my respondents and much of the public believe, are those careers random and accidental? Second, have the changes in women's managerial careers in finance over the past 35 years been gradual or sharp? Third, what effects, if any, did the legal and social changes of the early 1970s actually have on women's advancement in finance, a prestigious, male-dominated field targeted for reform? My theoretical concern is to see if the extreme case of female finance executives usefully outlines in exaggerated form the possibility, under certain conditions, of agency amidst structural constraints.

These questions grow directly out of existing sociological research on careers. This research has a variegated history. Several early studies examined career paths within professional occupations (Becker 1952; Reissman 1956; Smigel 1964). These studies found careers progressing in an orderly sequence toward higher levels of responsibility within an occupation or organization. However, Wilensky (1961) and, later, Rosenbaum (1979) and Evans and Laumann (1983) cast doubt on the notion that most careers move forward in an orderly fashion. An exception may be careers progressing up internal labor markets (ILMs) that advance smoothly along a forseeable path (Kerckhoff 1995).

The status-attainment model reduced careers into a few variables predicting current job status at a point in time (Blau and Duncan 1967). Critiques of status attainment emphasized the dependence of careers on organizational structure (White 1970; Rosenbaum 1979; Stewman and Konda 1983) and sectoral labor markets (Doeringer and Piore 1971; Beck, Horan, and Tolbert 1978). These developments coalesced into a new structuralist approach (Baron and Bielby 1980), which emphasized the impact of work structures such as firms, industries, and occupations on individual outcomes (Kalleberg and Berg 1988; Kerckhoff 1995). The attention to workplace structures deemphasized the study of individual ca-

reers weaving through these structures, although some analysts examined a few job transitions that were parts of longer careers (Rosenbaum 1979; Rosenfeld 1980).

Some studies have used models that take into account the dynamic nature of opportunity structures. This line of research has examined the effect on job shifts of historical labor market conditions (Blossfeld 1986), industry and occupation expansion and contraction (DiPrete 1993; DiPrete and Nonnemaker 1997), sector interdependence (Korn and Baum 1994), organization founding and failure (Haveman and Cohen 1994), and national differences in job distributions (DiPrete et al. 1997). Although this work has emphasized the importance of changing employment structures, it has studied either aggregate shifts in mobility or short-term individual mobility over just two points in time rather than the ways intact careers are shaped by changing structural conditions.

Most research that does focus specifically on careers has ignored the real time in which job histories unfold and has ignored historical context. Common strategies include using synthetic cohorts (Spilerman 1977; Spenner, Otto, and Call 1982) or concatenating job shifts to create simulated career sequences (Stewman and Yeh 1991; Yamagata et al. 1997). Researchers have further simplified careers by examining only intraorganizational job shifts (Rosenbaum 1979; Stewman and Konda 1983; Althauser and Kalleberg 1990) or by ignoring duration (Gaertner 1980; Stewman and Yeh 1991). ILM studies have focused on finding job transitions common to subgroups of firm employees (Althauser 1989; Althauser and Kalleberg 1990). As Stewman and Yeh (1991) point out, these simplifications are partly due to a lack of data on complete careers and partly due to the problem of parsimoniously comparing complex real careers. These simplifications have allowed analysts to learn much about structural properties of organizations but less about the real careers of individuals as they unfold through decades of time. An important exception is Stovel, Savage, and Bearman (1996), which analyzes intact male careers in one bank within historical context. Yet these data lack information on portions of careers developed outside the organization.

Most of the research discussed above has either restricted itself to men's careers or studied all workers in an organizational unit while ignoring the theoretical importance of gender (Yamagata et al. [1997] is an exception). Yet a growing number of studies focus on women. These studies often analyze short segments of women's work histories and disconnect careers into individual job shifts (Waite and Berryman 1986; DiPrete and Soule 1988; Rosenfeld and Spenner 1992). Numerous studies find that women's work lives are often affected by family obligations (Gerson 1985; Hertz 1986; Hochschild 1989, 1997) and geographically circumscribed by husbands' careers (Markham et al. 1983; Markam 1987; Steil and Weltman

1991). Some women respond to the challenges of juggling workplace and family responsibilities by becoming entrepreneurs (Carr 1996). The insight that women's market work and family lives are intertwined brings the study of women's careers closer to the life-course literature, which emphasizes the interweaving of career and family events (O'Rand and Krecker 1990; Moen 1992).

Some life-course studies argue that individuals compare their work lives to familiar models and struggle to shape them into these cultural patterns (Levinson 1978; Betraux 1982).[2] This would lead us to expect patterned careers. However, clear cultural models may not exist to help women in finance construct careers into recognizable patterns. Many respondents have few female role models and believe their career paths are unusual and marked by flukes and accidents. Furthermore, women face contradictory paradigms for structuring their lives. For example, the male managerial cultural pattern of intense commitment to the organization during the first several years of the career coincides with the life-cycle point at which most women in our society bear children (Hochschild 1971; Hertz 1986).

The life-course emphasis on entire life histories reintroduces the intact career of individuals as a viable unit of analysis. Ideally, data on intact careers would include spells out of the workforce or in part-time jobs, as these may have implications for future advancement. The study of intact careers should also consider the sex type of all jobs held, since time spent in female-dominated, sex-neutral, and male-dominated jobs may affect women's mobility (Jacobs 1989; Rosenfeld and Spenner 1992).

Since careers unfold within real time and space, the study of careers over the life course is in part a historical analysis. Social practices usually reproduce social structures with small revisions, but historical events can interrupt social regularities and rearrange structures (Sahlins 1991; Sewell 1996). Historical events shape careers by interacting with social structural constraints and openings.

A significant event in women's history is the early 1970s feminist pressure for the enforcement of legislation protecting women's employment rights. Title VII of the Civil Rights Act of 1964 prohibited employment discrimination on the basis of race, sex, and other criteria. Starting in the mid-1960s, this and other legislation helped open employment opportunities for African-Americans (Collins 1983). However, *women's* employment rights were not enforced until the early to mid-1970s (Freeman 1973; Ferree and Hess 1985; Kessler-Harris 1994). Earlier studies have not systematically addressed how this enforcement of women's employment rights has shaped women's careers.

[2] In addition, individuals plan their work lives in response to structural constraints (White 1970).

For several reasons, these female finance-executive careers, ranging from 1956 to 1994, constitute a particularly useful case for examining intact careers in historical context. First, we can expect that legal and social upheaval had a direct impact on financial organizations, since the federal government monitored banks and targeted some for early lawsuits (Ashenfelter and Hannan 1986; Reskin and Hartmann 1986). Second, respondents are predominantly from middle- and upper-class backgrounds, are highly educated, and have worked continuously in the labor force since college. They are rich in human capital and are well poised to take advantage of these legal and social changes. Third, unlike occupations that women entered as men were exiting due to diminished rewards, relative to other male-dominated jobs (Reskin and Roos 1990), executive positions in finance-related fields have remained high paying, prestigious, and male dominated (Korn/Ferry International 1993). We might expect more resistance to women's advancement in finance-related executive positions than in occupations that men are abandoning. This is a case of formidable structural obstacles confronted by people with ample human capital and legal resources. It provides an ideal opportunity for the study of the interaction of human agency and social structural constraints.

This overview raises three important issues. First, what do intact careers look like, how are they shaped by organizational and occupational structures, and do they fall into patterned trajectories? The careers literature is inconclusive on whether patterned career trajectories exist in many fields. If patterns do exist for financial managers, the extent to which these are shaped by ILMs and other workplace structures is unclear. Second, how have careers changed over time? Much of the literature ignores temporality and uses methods insensitive to historical change. Third, what have the effects of the legal and social changes of the early 1970s been on the theoretically important case of female finance executives, a group poised to marshal their resources against structural barriers to advancement?

Theoretical interests inform the choice of methods, and methods shape theoretical questions (Ragin and Zaret 1983; Ragin 1987; Abbott 1988). In Ragin's (1987) terms, most sociological research on women's work lives is either "variables-oriented" and quantitative or "case-oriented" and qualitative. In the trade-off between generality and complexity, variable-based strategies pursue generality, while case-based approaches explain complexity. Variable-based research uses linear methods to predict the relative weight of abstract individual and social structural properties, envisioned as variables, on individuals' attainment or wages (e.g., Jacobs and Blair-Loy 1996; Marini and Fan 1997). This approach powerfully measures probabilistic relations between variables in large populations. Yet variables-oriented research assumes that "a certain effect exists independent

of context, that is, independent of the values of the other causal variables in each case" and presupposes a model that is essentially additive rather than one that accommodates multiple, intersecting causes (Ragin 1987, p. 63–64). Since we have no reason to believe that effects on women's careers are independent, linear, and not offsetting, I do not use models that make these assumptions.

Qualitative, case-based research on women's work generally studies a case of particular theoretical interest based on a small, nonrandom sample of respondents interviewed in-depth by the researcher (e.g., Gerson 1985; Hertz 1986; Hochschild 1989, 1997; Williams 1989).[3] Case-based approaches cannot make general statements of empirical regularity about large populations. Yet they can uncover and interpret constellations of social and individual forces that change or reproduce social processes.

Qualitative samples are small for theoretical reasons. Many researchers gather data and develop theory in an interactive manner until "saturation," when interviews yield no new theoretically interesting information and additional interviews are unlikely to be useful (Glaser and Strauss 1967). There are also practical grounds for small samples: in-depth interviews are time consuming to conduct and laborious to analyze.

I pursue the strategy of the extreme case. In contrast to random, variable-based studies that examine mean effects of variables on the middle hump of the bell curve, my study investigates one extreme end of the distribution of employed women. Human action is shaped by available resources and structural barriers (cf. Sewell 1992). My case is high on both axes: respondents are rich in resources and face formidable structural obstacles. Other extreme samples (e.g., female scientists) may also be high on both axes and may also provide useful cases of resourceful women negotiating structural obstacles to advancement. Restricting the sample to female executives in *finance*-related fields controls for variation across different industries and professions. My respondents are similarly affected by the same macroeconomic and political forces, define themselves as a coherent occupational group, and belong to a common professional organization. My findings are not statistically generalizable but may be hypothesized to occur in similarly situated cases and may illuminate similar processes in less extreme cases.[4] Other case-based studies could investigate

[3] For example, Gerson (1985) interviewed 63 young women who grew up in the 1970s and are theoretically interesting as members of cohorts "most responsible for the rise in the percentage of women workers [and] the decline in the birthrate" (p. 10). Hertz (1986) interviewed 21 married couples in which each member had a corporate career in order to examine family and work relations among spouses who are economic equals.

[4] Hochschild (1983) provides another example of an extreme-case strategy. By elucidating the processes of emotional labor in the extreme case of flight attendants,

other corners of the social landscape by examining samples that are low on one axis and high on the other or are low on both axes.

This article differs from standard qualitative approaches in that I conducted a formal, replicable analysis of unfolding careers. My theoretical questions demand a focus on intact careers in the context of a shared labor market history with methods sensitive to the effect of early career steps on later ones and to the dynamic nature of employment structures. Optimal matching, a subset of sequence analysis techniques, is a method for seeking common patterns in sequences (Abbott and Hrycak 1990; Abbott 1995; Dijkstra and Taris 1995; Stovel et al. 1996). It provides succinct comparisons and classifications of lengthy careers, even if they transgress organizational or labor market boundaries. It allows the study of complex careers over the life course instead of aggregating and reducing them into a few job shifts. Optimal matching is a heuristic technique designed to probe complex social processes rather than to ascertain the relative importance of abstract variables. Unconstrained by the simplifying assumptions of variable-based approaches, I detect and explain the conjunction of factors that create career patterns. A relatively small sample is appropriate for an analysis that examines the complexity and nuance of a theoretically important case rather than makes aggregate predictions. This small, qualitative, and nonrandom sample does not meet the assumptions necessary for most statistical tests. Nonetheless, I occasionally use "difference of means" statistical tests as heuristic devices to ascertain structuring within my data or to illustrate differences between patterns. Sociology needs to develop better customs for assessing the "significance" of patterns discovered in the formal analysis of qualitative data.

This article also analyzes respondents' own interpretations and action. Their subjective assessments contribute to our understanding of the patterning and pace of female executive careers. The argument thus transcends the familiar dichotomy between objective determinants of social processes and the role of subjects' actions and interpretations (Bourdieu 1990; see also Kalleberg 1989; Emirbayer and Goodwin 1994; Emirbayer 1997).

The next section presents the finance-career data and methods in detail. "Patterns and their origins" uncovers five distinct career trajectories and analyzes the factors that shape them. "Changes in opportunity structures" analyzes changes in women's career opportunities over time. The article concludes with discussions of the transformation of structures by histori-

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Hochschild enabled other analysts (e.g., Leidner 1993; Pierce 1995) to see emotional labor as a job requirement in other occupations.

cal events, human agency and interpretation, and implications for feminism.

DATA AND METHODS

Data

The data consist of life histories of 56 women in high-ranking, finance-related jobs. Respondents belong to a finance executives' professional organization based in a large U.S. city. This organization helped me gain access to respondents by giving me a membership directory and by endorsing the research, but it did not try to influence the analysis or findings. Each respondent filled out a life-history questionnaire detailing her work, family, and education history from age 17 to the present. I then conducted in-depth interviews with each respondent on her career, family, triumphs, and regrets. This article analyzes respondents' work lives from age 22 to the interview date in 1994.

Respondents work in commercial banks, financial services (including investment banks, real estate investment firms, and financial consulting firms), manufacturing and diversified services companies, and public accounting and law firms. They have reached levels in companies ranging from vice president (in manufacturing), senior vice president (in financial services), and partner (in law and accounting firms) up to chief financial officer, managing director, chief executive officer, and managing partner. Nine women have left large companies to form their own firms.

In 1994, respondents ranged in age from 36 to 60. All have bachelor's degrees; 86% have graduate degrees. Of the respondents, 21 are mothers, 47 were married at least once (20 are divorced, and 6 have remarried). With the exception of one African-American, all the respondents are white. The findings can thus strictly refer only to white female finance executives.

Respondents' annual compensation in 1993 ranged from approximately $75,000 to $1 million, with a median of $250,000.[5] In past years, some individuals made additional millions with the sale of stock. Currently married respondents earned between 25% and 100% of their household income, with a median of 50%.

All respondents belong to the theoretically interesting case of senior women in elite, male-dominated, finance-related occupations. They define

[5] The low end of the compensation distribution includes four women who work in nonprofit firms or who recently started a business. Disregarding these cases changes the range to $125,000 to $1 million.

themselves as belonging to a coherent professional group, and their careers are subject to the same political and macroeconomic influences. The sample is diverse across industries, types of organization, and age, thereby containing variation on some dimensions.

Job-Level and Organization-Size Codes

This analysis relies on the data collected in the life-history questionnaires and interviews. It uses detailed information and exact dates on job type, firm size, promotions and employer shifts, industry, geographic mobility, and education for every year of respondents' adult lives. I coded respondents' careers using a combination of deductive and inductive reasoning. I read industry reports, general literature, and compensation surveys and talked to three management consultants to understand the determinants of what I call the career value of a position.[6] Career value is a position's degree of importance, responsibility, and risk. In the present, career value rewards the incumbent with income, prestige, self-esteem, and the opportunity to earn bonuses and stocks. The career value of a position is also an investment in the future. It can be leveraged into a step toward a higher position, or it can anchor a lateral move.

I determined that, among finance-related managers, two crucial dimensions of a position's career value are job level and organization size. Combining my knowledge from industry reports and the management consultants with mappings of respondents' actual career steps, I coded the jobs women held into nine categories (see table 1). Job levels 4–8 are broad categories that are consistent across industries and over time. These categories range from an entry-level, finance-related job, such as a financial analyst or management trainee (coded "4"), to the top position in an organization, such as managing partner of an investment bank or CEO of a firm (coded "8"). I also coded the years respondents spent as entrepreneurs, running their own finance-related firms (coded "en"). Two categories are outside the finance labor market: female-dominated jobs (e.g., elementary school teacher, secretary, etc., coded "fe") and a residual category of nonfinance jobs that were not male dominated (coded "nf"). Since prior research has shown that the sex-type of the occupation is an important variable in women's work histories (Jacobs 1989), I coded female-dominated occupations separately.

The salary surveys demonstrate that organizational size is the single

[6] The compensation reports and industry surveys are Finance Club (1982), *Fortune* (1972–87, 1994*a*, 1994*b*), William M. Mercer, Inc. (1993), Standard and Poor (1994*a*, 1994*b*, 1995), Top Executive Compensation (1994), and Dunn and Bradstreet (1960–94).

TABLE 1

JOB-LEVEL AND ORGANIZATION-SIZE CODES FOR OPTIMAL MATCHING ANALYSIS

Variable	Definition
Job Code:	
nf	Nonfinance, non-female-dominated job
fe	Female-dominated job (e.g., elementary school teacher)
ps	Professional full-time student, such as law or business
4	Entry-level management trainee or analyst
5	First positions with significant management responsibility (e.g., assistant treasurer in a manufacturing company, vice president in a financial services firm)
6	Mid–senior management positions (e.g., corporate treasurer in manufacturing, senior vice president in financial services)
7	Senior management positions (e.g., chief financial officer in manufacturing, executive vice president in financial services, senior partner in law or accounting firm)
8	Top positions (e.g., chief executive officer, managing partner)
en	Entrepreneur, finance related
Organization Size:	
S	Small organization: under $50 million in sales in 1993
M	Medium-size organization: larger than small organizations but too small to be on Fortune 500 list
L	Large organization: size between 250th and 500th Fortune 500 manufacturing firms or between 25th and 50th Fortune financial services firms
V	Very large organization: larger than 250th Fortune 500 manufacturing firm or larger than 25th Fortune 50 financial services firm

NOTE.—Example: nf 4V 4V 4V 4V 4V 4V 4V 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V. This person spent a year in a nonfinance job, then worked 13 years as a level-4 analyst in a very large firm, was finally promoted to a level-5 assistant treasurer position, and eight years later made it to a level-6 position as corporate treasurer.

* Organization size codes are based on the organization's relative standing within the industry in a given year. Size is measured by sales, except commercial banks, which are measured in assets.

most powerful predictor of a given job's compensation (William M. Mercer, Inc. 1993; Top Executive Compensation 1994). The traditional sociological measure of size, number of employees (Stolzenberg 1978; Kalleberg and Van Buren 1996), is a poor indicator of a given job's importance because many companies have downsized (Useem 1996). In fact, management consultants warned that an organization with a very large number of employees could be considered bloated and lend less rather than more prestige to executive positions. Instead of using the number of employees,

I measure commercial banks in terms of assets, and I measure financial services, diversified services, and manufacturing companies in terms of annual sales. These are the units most widely used by business managers themselves.

I explored several ways to code organization size and to control for the expansion of American companies over time. I finally decided on a size scale of organizations coded by their standing in their industry in a given year relative to industry leaders, the Fortune 500 manufacturing and 500 service companies. These categories are easy to interpret, and they account for the variation predicted by the experts. They also align well with discrete breaks in my data's size distribution.

I assigned each organization one of four size codes (see table 1). I coded an organization "V" for very large if its size is greater than the size of the median Fortune company in its industry the year measured. I coded it "L" for large if the organization is smaller than the median but still within the size range of the Fortune companies and "M" for medium if the organization is smaller than the smallest Fortune company. I coded organizations "S" for small if they were very small across the distribution of organizations.[7] To be coded "V" or "L," an organization does not have to be actually on the Fortune list, which excludes closely held companies.

I arranged each respondent's jobs in a sequence of numbers, with one job coded each year from age 22 to 1994. Careers are coded each year by job code (first digit) and organization size (following letter). Job level and organization size can vary independently of each other.

Each respondent's career is coded into a sequence with job level each year as the first digit and organization size as the following letter. For example, consider the following sequence: nf 4V 4V 4V 4V 4V 4V 4V 4V 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V. This person, case 12, spent a year in a nonfinance job, then worked 13 years as a level-4 analyst in a very large firm, was finally promoted to a level-5 assistant treasurer position, and eight years later made it to a level-6 position as corporate treasurer.

Career slope.—Successful finance careers are organizationally and normatively oriented upward over time. One way to think about career advancement is with the "career slope." The career slope is not a precise measure but rather a rough heuristic to help us assess the rate of job mobility. The overall career slope is simply the highest *finance job* level achieved minus the starting finance job level, divided by the number of years it took to reach the highest job level. The calculation ignores jobs

[7] In 1993, organizations with under $50 million in sales are coded as small.

outside the finance labor market. To calculate career slopes, I first translated each job level into a value that represents the average number of years it took sample members to reach that level. In other words, the slope calculations are weighted to incorporate the empirical fact that certain job transitions (e.g., from level 4 to 5) are generally made in less than half the time than other transitions (e.g., from level 5 to 6). The slopes of overall careers in the sample range from 0.38 to 2.10, with a median of 0.93 and a mean of 0.98. In addition to discussing overall career slopes, the article will report the slopes of particular career segments in order to explore changes in the rate of mobility across particular time periods or across the duration of a career.

Optimal Matching Techniques

After coding job and family steps into strings of events over time, I analyzed these steps with optimal matching techniques (see Sankoff and Kruskal 1983; Abbott and Hrycak 1990). This method uses a metric to develop a measure of distance between the strings of events.[8] Each pair of sequences has a distance between them that is the minimal sum of the costs of the arithmetic operations required to turn one sequence into the other. Substitution costs are the costs of transforming an event from one sequence into the other, while insertion and deletion costs are incurred when adding or subtracting events from one sequence to make it resemble the other in a given pair. The appendix presents a simplified example.

I analyzed the sequences of job level and organization size codes with Andrew Abbott's optimize (ver. 2.17) software program and made three cost adjustments based on theoretical criteria. First, I assigned an extra cost to the transition from outside to inside the finance labor market to reflect the greater barriers to this move compared to a promotion within the labor market. Second, I assigned an extra cost to making a theoretically unlikely jump up several levels in the finance job hierarchy.

The third cost adjustment concerns the cost of insertions and deletions relative to substitutions. Since ages varied greatly, career lengths differed. I did not want sequence length differences to be the main determinant of similarity. It should be "cheaper" to compress or stretch careers with similar positions but different lengths than to turn different jobs into one an-

[8] The most common sequence metric establishes a "distance" between sequences based on how difficult it is to transform sequences into one another (Levenshtein 1965). The standard algorithm for alignment is the Needleman-Wunsch algorithm, which calculates alignments based on costs associated with substitution and insertion.

other. Hence, I made insertion and deletion costs substantially lower than substitution costs.[9]

The algorithm sums the costs to calculate the paired distances between career lines. I then classified these distances by the clustering techniques in SPSS. Since different cluster algorithms can yield different solutions (Aldenderfer and Blashfield 1984), I explored several distance measures and clustering methods. Average and complete linkage methods produced clusters that differed in only minor ways. The squared Euclidean distance and a complete linkage method yielded the most easily interpretable clusters. The jump in agglomeration coefficients suggests a five-cluster solution.

PATTERNS AND THEIR ORIGINS

Although many senior women in finance believe their career paths are the result of flukes and accidents, I find that the careers cluster into a few general types. The trajectories are shaped by firm ILMs, environmental turbulence, geographic mobility, and entrepreneurship.

Description of Career Patterns Revealed in Clusters

Figure 1 presents career sequences making up the five-cluster solution.[10] Sequence numbers refer to job-level codes (the first digit) and organization-size codes (the following letter) in table 1. The sequences are justified along the right margin and end at the interview date in 1994. Each sequence begins when the respondent was age 22. Each cluster contains careers of different lengths, as I deliberately set the insertion, deletion, and substitution costs so that sequence length would not be the main determinant of similarity. In the figure, the vertical lines surrounding the years 1970–73 demarcate a historical watershed that I will discuss below.

[9] Substitution costs range from 0 to 1.00. The cost of moving into the finance labor market contributes 19% of the total possible substitution cost of 1; the cost of making a theoretically unlikely jump contributes 26% of the total possible cost, and the matrix of 1 minus the probability in the data of a transition from one particular job level/organization size state to another contributes 55% of the total substitution cost. I explored several options and found that an insertion and deletion cost of 0.48, which is just under half the largest substitution cost, created meaningful alignments not overly reliant on either substitutions or insertions and deletions. The substitution cost matrix is in table A1 in the appendix.

[10] An independent samples t-test suggests that the clusters represent real clumping of the data. The group of within-cluster distances and the group of between-sample distances were each fairly normally distributed. The difference between the mean of within-cluster distances and the mean of between-cluster distances was statistically significant ($P \leq .001$).

Clusters 1 and 2 show orderly careers progressing up the finance job hierarchy. Cluster 1 groups the careers moving up in very large firms (V). Cluster 2 groups the careers advancing in large firms (L). These are the corporate climbers.[11] Only eight of the 26 sequences in clusters 1 and 2 spent over a year in jobs outside the finance labor market (nf, fe) before entering finance.

Cluster 3 contains careers that advance in medium and small organizations. All but one career here has reached job level 7, a higher level than most of the corporate climbers have attained. We can call cluster-3 careers big fish in small and medium-sized organizations. The cluster-3 careers are less orderly than those in clusters 1 and 2, as most cluster-3 respondents shift between different size firms during their careers. Four of the nine careers began in nonfinance jobs.

Cluster-4 careers appear the least orderly. Of the 15 careers, 10 began outside the finance labor market. Not only do they move around differently sized organizations, six careers skipped over entire job levels (starred), and five careers go through demotions (underlined). They have reached high-level positions in large firms: seven out of the 15 careers have reached level 7 or higher, and 12 out of 15 work in large or very large organizations. They have thus used these moves to great advantage and may be considered movers and shakers.

Cluster 5 contains six out of the nine entrepreneurs in the sample. Three entrepreneurs are clustered elsewhere because they owned their own businesses for a short time and mostly resemble careers in other clusters.

In sum, senior female finance careers fall into a few general patterns with minor variations. Almost half of the careers are corporate climbers: they move steadily up the job hierarchy in large organizations (clusters 1 and 2). About 17% are big fish that have reached high levels in medium and small organizations (cluster 3). Over one-quarter, the movers and shakers, have shown great mobility by switching among different size firms, skipping up or down job levels, and from outside the finance labor market (cluster 4). Of the respondents, 16% started their own firms; two-thirds of these entrepreneurs are grouped in cluster 5. Almost half the careers begin outside the finance labor market, and half of these began in female-dominated occupations.

Forces Creating the Patterns

Although I explicitly clustered the careers on the basis of job level and organization size, they turn out to be patterned by an underlying factor: the degree of career orderliness (cf. Wilensky 1961). Orderliness is shaped

[11] I thank an anonymous reviewer for suggesting the labels for the four career types.

DATE 1956 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94

CLUSTER
CASE

1 *corporate climbers in very large organizations*

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10.                  4V 4V 4V 4V 4V 4V 4V 4V 4V 4V|4V 4V 4V 4V|5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V 7S 7S 7S 7S 8S 8S 8S 8S 8S
3.                        nf nf nf nf nf nf|nf nf 4V 4V|5V 5V 5V 5V 5V 5V 5V 5V 5M nf*7L 7L 7L 7L 7L 7S 7S 7S 7S en en
16.                             fe fe fe nf|nf nf nf nf|nf nf nf nf nf nf nf ps ps 4M 4M 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V
12.                                nf 4V 4V|4V 4V 4V 4V|4V 4V 4V 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V
2.                                 4M 4M 4M|4V 4V 4V 4V|4V 4V 4V 4V 5V 5V 5V 6V 6V 6V 6V 6V 6V 7V 7V 7V 7V 7V 7V
34.                                   fe fe|fe fe fe fe|fe 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 6V 6V 6V 7V nf 7M 7M 7M
26.                                   4V 4V|4V 4V 4V 4V|5V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6M 6M 7M 7M 7M 7M 5M 5M 7M 5M 5V
19.                                        |fe fe fe fe|fe 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 5V 4V 5V 6V 6V 6V en en en en
55.                                        |4V 4V 4V 4V|5V 5V 5V 6V 6V 6V 6V 6V 7V 7V 7V 7V 7V 7V 7V 7V 7V 7V 7V 7V 7V
14.                                        |      ps|ps 4V 4V 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 5V 5V 6L 6L 6L 6L 6L
53.                                        |      nf|nf nf 4M 4M 4M 4M 4V 4M 4M 5M 5M 5M 5S 5S 5V 5V 5V 5V 5V 5V 5V 5V
45.                                        |        |4L ps ps 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 5V 5V 5V 5V
33.                                        |        |ps ps 4V 4V 4V 5M 5M 6M 6M 6M 6M 6M 6M 5V 5V 5V 5V 6V 6V 6V 6V
48.                                        |        |   4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V 6V 6V
44.                                        |        |   4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V 6V 6V 6V 6V 6V
11.                                        |        |   ps ps ps 4V 4V 4V 4V 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 6V 6V
49.                                        |        |         ps 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V
42.                                        |        |         ps ps ps 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V
31.                                        |        |                  ps ps 4V 4V 4V 5V 4V 4V 5V 5V 6V 6V 6V 6V 6V
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2 *corporate climbers in large organizations*

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40.      fe fe nf nf nf fe fe fe 4L 4L 4L 4L 4L 4L|4L 4L 4L 4L|4L 4L 4L 4L 4L 4L 4L 4L 4L 4L 5L 5L 5L 5L 5L 5L 5L 6L 6L 6L 6L
41.                                  ps ps nf nf|nf 4L 4L 4L|4L 4L 5L 5L 5L 5L 5L 5L 5L 6L 6L 6L 6L 6L 6L 6L 6L 6L 6L 6L
7.                                              |nf fe fe fe|fe nf nf nf nf 4L 5L 5L 5L 5L 5L 5L 5V 5V 6L 6L 6L 6L 6L 6L 6L
56.                                             |nf nf nf nf|nf nf nf nf nf nf 4L 4L 4L 4L 5L 5L 5L 5L 6L 6L 6L 6L 6L 6L 6L
6.                                              |nf 4L 4L 4L|4L 4L 4L 4L 4L 4L 5L 5L 5L 5L 5L 6L 6L 6L 6L 7M en en en en en
21.                                             |        |4L 4L 4L 4L 4L 4L 4L 4L 4L 5L 5L 5L 5L 5L 6L 6L 7L 7L 7L 7L 7L
37.                                             |        |          ps ps 4V 4V 4L 4L 4L 4L 4L 5L 5L 5L 5L 5L 5L 5L
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3 *big fish in small and medium-sized organizations*

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32.                 4V 4V 4M 5M 5M 5M 5M 5M 5M 5M | 6M 6M 6M 5V | 5V 5V 5M 5M 5M 5M 5M 6M 6M 6M 6M 6M 6M 7M 7M 7M 7M 7M 7M 7M 7M
50.                                          nf fe | fe fe nf nf | nf nf nf ps ps ps 4M 4M 4M 4M 5M 6M 6M 6M 7M 7M 7M 7M 7M 7M
36.                                          fe fe | fe ps ps 4L | en en en 4M 5M 5M 6M 7M 7M 7M 7M 7M 7M 7M 7S 7S 7S 7S 7S 7S 7S
 8.                                                | fe fe fe fe | fe 4M 4M 4M 4M 5M 5M 5M 5M 5M 5M 6V 6V 6V 6V 6V*8M 8M 8M 7V 7V
30.                                                |             |       4M 4M 4M 4L 4L 4L 4V 4M 4M 5M 5M 5M 5M 5M 6M 6M 6M 6M 7M
38.                                                |             |             4M 5M 5M 5M 5M 5M 6L 6L 6L 6L 7M 7M 7M 7M 7M 7M 7M
 4.                                                |             |             nf nf ps ps 4M 4M 4M 5M 5M 5M 5M 6M 6M 6M 6M 7M 7M
17.                                                |             |                ps ps 4V 4V 4V 4V 4V 4V 4M 5M 5M 5M 5M 5M 6M 6M
35.                                                |             |                   4S 4S 4S 4M 5M 5M 5M 6M 6M 7M 7M 7M 7M 7M 7M
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4 *movers and shakers*

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15.    fe fe fe fe fe fe fe fe fe fe fe fe fe fe | fe fe 4S 4S | 4S 4S 4S 4S 4S 4S 4S 4M 4M*6M 6M 6M 6M 6S 6M 6M 6M 6M 6M 6M 6M
43.                 fe fe fe fe fe fe fe fe fe fe | fe fe fe fe | ps ps ps 4L 4L 4L 4L 4L 4L 5L 6L 6L 6L 5L 5L 5L 5L 5L 5L 5L
20.                    fe fe fe fe fe fe fe fe fe | fe 4V 4V 4V | 4V 4V 4V 4V*6V 6V 6V 7M 7M 7M 7M 7M 7M 7M 7M 7L 7L 7L 7M 7M 7L 7L
13.                       fe fe fe fe fe fe fe fe | 4M 4M 4M 4M | 4M 4M 4V 4V 5S 5S 5S 5S 5S 5S 5M 5M 6M 6M 4M 4M 4M 4M 5M 5M 5M
47                        nf fe fe fe fe fe fe fe | fe fe fe nf | nf ps ps ps 4L 4L 4L 4L 4L 4L 4L 5L 6L 6L 6L 6L 6L 6L*8L 8L 8L
 1.                       fe fe nf nf fe fe fe fe | fe fe fe fe | ps ps 4L 4L 4L 4L 4L 5V 5V 5V 6V 6V 6V 6V 6V 6L 6L 6L 6L 6L 6L
46.                                    ps ps ps 4L | 4L 4L 5M 6M 6M 6M 6M 6M 6M 6M 6M*7V 7V 7V 7V 8V 8V 8V 8V 8V
27.                                    fe fe fe fe | fe fe fe fe | ps ps ps 4M 4M 4M 4M 4M 4M 4L 4L 4L 4L 5V 5V 5V 6V 6V 6V 6V 6V
52.                                                |       ps ps | ps 4V 4V 4V 4V 4V ps ps 4V 5V 5V 4L 4L 4L 5L 6L 6L 6L 6L 6L 6L
23.                                                |       fe nf | nf nf ps ps 4V 5M 5M 5M 5M 5M*7M 7M 6L 6L 6L 6L 6L 7L 7L 7L 7L
 5.                                                |          nf | nf fe fe fe fe ps ps 4V 4V 4V 4V*7L 7L 7L 7L 8L 8L 8L 8L 8L 8L
54.                                                |             |    ps 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5L 5L 5L 5L 6L 6L 7L 7L 7L
22.                                                |             |    fe fe fe nf nf 4M 4M 4M 4M 4M 4V 4V 4V 4L 5L 6L 6L 6L 7L 7L
18.                                                |             |       4V 4V ps ps 4M 4M 4M 4V 5V nf 5V 5M 5M 5M 5M 5M 6M 6M 6M
24.                                                |             |          4M 4M 4M 4M 4M 4V 4V 5V 5V 4M 4L 5L 5L 5L 5L 5L 5L 5L
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5 *entrepreneurs*

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25.                    ps ps ps 5S 5S 5S 5S 5S 5S | 6S 6S 6S 6S | 6S 6S 6S 6S 6S 6S 7M 7M 7M 7M 7M 8M 8M en en en en en en en en
39.                          nf nf nf nf nf nf nf | nf nf nf nf | nf nf 4V en en en en en en en en en en en en en en en 6M 6M en en en
51.                                   ps 4V | 4V 4V 4V 4V | 5V 5V en en en en en en en en en en en en en en en en en en en en en
28.                                      nf | nf 4V 4V 4V | 5V 5V 5V 5V 5V 6V 6V en en en en en en en en en en en en en en en en en
 9.                                         | 4M 4M 4M 4V | 4M 4M 4M 4M 4M 5M 5V 5V 6V 6V 6V 6V 6V 6V en en en en en en en en en
29.                                         |             |       ps 4M 4M 4M 4V 4V 4V 4V 4V 4V 4V 4V 5V*7S 7S en en en en
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DATE  1956 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94
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FIG. 1.—Five-cluster solution of job level and organization size. Sequences within clusters are ordered by descending length. An underline indicates a demotion, and an asterisk denotes that the career skipped a job level.

by the number and type of employer organizations, environmental uncertainty, geographic restrictions on mobility, and entrepreneurship.

Orderly careers and firm internal labor markets.—Conceptually, the ideal-type of an orderly career advances smoothly along a foreseeable path, such as an ILM (cf. Kerckhoff 1995, p. 337). Interorganizational transitions are rare and not forced by an unexpected merger or bankruptcy. Orderly careers allow long-term planning. In contrast, the ideal-type of a disorderly career shifts between disparate fields and among several different organizations. Contingencies cause unplanned job changes. Geographical ties to a spouse's career can also cause unplanned job shifts or can prevent one from accepting a promotion

Table 2 presents several dimensions of orderliness and disorderliness of careers within clusters. These dimensions indicate that clusters 1, 2, 3, and 4 are on a continuum, with clusters 1 and 2 being the most orderly and cluster 4 the most disorderly. (I discuss the entrepreneurial cluster 5 separately below.)

Working in a small number of organizations and spending most of one's career with one employer are dimensions of career orderliness.[12] The first column of table 2 shows that cluster-1 members worked for a median number of two employers, cluster-2 respondents worked for a median of just one employer, and clusters 3 and 4 worked for a median of three employers during their finance careers. The second column displays the proportion of careers in each cluster with over half their length in one organization. This indicator controls for career length, and it decreases monotonically across clusters 1–4. Almost 80% of cluster-1 respondents and over 70% of cluster-2 respondents spent over half their finance careers with one employer. This percentage falls to 56% of cluster 3 and drops to just 20% of cluster 4.

These indicators suggest the presence of firm ILMs. Since the careers are by definition successful, careers concentrated in one organization have probably advanced up firm job ladders (Althauser 1989; Althauser and Kalleberg 1990). Firm ILMs characterize most of the careers in clusters 1 and 2, about half the careers in cluster 3, and few of the careers in cluster 4.

Disorderliness, turbulence, and career advancement.—A manager in finance could make several strategic organizational changes and still have

[12] All calculations are as of the interview date in 1994 and are right truncated. Careers with high values on the disorderly indicators are already disorderly, regardless of future career moves. Careers with high values on the orderly indicators could conceivably become more disorderly later, especially if faced with severe environmental shifts. The youngest respondents' careers are the most severely affected by right truncation. However, the shortest career is already 14 years long and is probably unlikely to depart drastically from its already established pattern.

TABLE 2

ORDERLINESS AND DISORDERLINESS INDICATORS AFFECTING PROPORTION OF CAREERS IN EACH CLUSTER

Cluster	Median Number of Organizations in Finance Career	Proportion of Careers with over Half Length in One Organization	Proportion of Careers with < 7 Years on Average per Organization	Proportion of Careers Facing Environmental Turbulence	Proportion of Careers Geographically Restricted	Proportion of Careers Beginning outside Finance
1 (19)	2	.79	.32	.21	.21	.26
2 (7)	1	.71	.14	.14	.29	.43
3 (9)	3	.56	.44	.67	.33	.44
4 (15)	3	.20	.60	.73	.47	.66

NOTE.–*N*s are given in parentheses. Clusters 1 and 2 are corporate climbers, cluster 3 is big fish in small and medium-sized organizations, and cluster 4 is movers and shakers.

an orderly career. But if she changes employers too frequently, her career will look disorderly. Column 3 of table 2 shows the proportion of careers in each cluster that spent an average of six years or less in each organization. Less than a third of the careers in clusters 1 and 2, almost half the cluster-3 careers, and 60% of cluster-4 careers changed firms frequently.

One cause of a disorderly career is turbulence in the organization, industry, or wider economy. Some careers face a particularly high degree of environmental turbulence, including mergers, restructuring, severe competition, and employer bankruptcy. Of the careers in the total sample, 22 (39%) were directly affected by environmental turbulence. Turbulence can have negative effects on careers, such as job loss or demotion. It can also have positive repercussions, such as the creation of new opportunities when companies restructure.

The fourth column of table 2 reports the proportion of careers affected by turbulence. Only five of the 26 respondents in clusters 1 and 2 (21% and 14% respectively) faced environmental turbulence, while the other careers were buffered from extreme uncertainty. In contrast, 11 out of the 15 careers in cluster 4 were affected by turbulence.

Over half of the turbulent careers in the total sample are in financial services. Financial service firms in the sample tend to be smaller than the firms in other industries and, in the 1970s and 1980s, particularly vulnerable to volatile profits, mergers, and acquisitions. Yet surviving firms made extremely high profits in the mid- to late 1980s (Gart 1989). Respondents in financial services undergo more career disruptions but also enjoy higher compensation than do executives in other industries (Top Executive Compensation 1994).

Of the 22 turbulent careers in the sample, 11 had career slopes below the sample median. Six of these were in the lowest quartile. These careers were particularly hurt by turbulence. But nine turbulent careers ascended faster than the median slope, and six were in the highest quartile. In fact, these fast-paced turbulent careers beat the overall advancement rate of 15 of the 19 careers safely ensconced in stable firm ILMs. Although the employment security and promotion opportunity characterizing many ILMs is assumed to benefit employees (Doeringer and Piore 1971), there are circumstances in which turbulence breaks the implicit ILM contract and creates even better opportunities for some workers.

Environmental turbulence affected about three-quarters of the cluster-4 careers, most of which were in the financial services sector. Turbulent careers may have been a norm during the 1980s for financial services managers and bankers of either gender. Respondents in cluster 4 were generally very successful; half had reached the top two job levels (7 or 8) in large organizations. Most of these women used the turbulence to their

advantage and landed on their feet after a merger, downsizing, or bankruptcy.[13]

For example, a former banker interpreted the acquisition of her bank a few years ago as "a signal to myself that it was time to move, to do something more challenging," and she landed a more interesting job in financial consulting. Similarly, a second respondent remarked that "it was a break" that her company was sold in the mid-1980s. She continued, "I didn't plan on it, but it was a fortunate that the company was sold and I had to find another job. . . . I was recruited to become director of investor relations at American Foods. It was a great opportunity. It was a big jump up in pay. I went from a $1 billion company to a Fortune 500 company."

A third respondent benefited enormously from a mid-1980s merger of her financial services firm with a broker/dealer organization. She was promoted from controller of the financial services firm to the CFO of the newly combined firm. She said: "It was the biggest promotion and the biggest vote of confidence I'd ever received." Although cluster-4 careers appear disorderly in terms of frequent employer change, given the turbulence of the financial services industry, they may be modal careers among successful financial services executives.

Curiously, the monotonic relationship between cluster, the median number of employers, and the proportion of careers facing turbulence breaks down between clusters 1 and 2 (table 2). At first glance, the very large firms in cluster 1 seem to provide less stable environments than the large firms in cluster 2. This surprising pattern may be due to the failure of one very large bank in the 1980s. Three of the four careers experiencing turbulence in cluster 1 (as well as six careers in other clusters) had worked for this one very large organization. Bankruptcies of very large banks are fairly rare, but when they occur, they affect huge numbers of employees. This bankruptcy galvanized six respondents to leave commercial banking for the more lucrative financial services industry, which was just starting to open its doors to women in the early 1980s.

Restrictions on geographical mobility.—Geographical restrictions due to family relationships also shape career patterns. Relocating to accommodate a spouse's career or turning down an opportunity because it would entail relocating one's family can disrupt orderly advancement. Women are more likely than men to have geographical limits on their careers (Markham 1987; Steil and Weltman 1991). Of the sample, 34% reported restrictions in a third or more of their years in finance.

Table 2, column 5 shows that the proportion of careers with geographi-

[13] Women whose careers were seriously damaged by turbulence may have been selected out of the sample.

cal restrictions increases monotonically by cluster. Only a fifth of the orderly cluster-1 careers faced geographical limitations, while almost half of the disorderly cluster-4 careers were geographically circumscribed. Cluster-4 respondents seem remarkably agile at creating career opportunities in the midst of geographical restrictions and environmental turbulence. Other women may have been less able or less lucky in exploiting limited mobility and may have seen their careers stall; these women would have been selected out of my sample.

Beginning careers outside the finance labor market.—The proportion of careers beginning outside the finance labor market increases monotonically across clusters 1–4 (table 2, col. 6). Only a quarter of cluster-1 careers started out in nonfinance jobs, whereas two-thirds of cluster-4 careers began outside finance. Beginning one's careers outside the finance labor market is another dimension of disorderliness. We will see below that this factor is sensitive to the time in which the finance career began.

Time spent working part-time or out of the labor force.—There is much debate over whether companies should structure career ladders to allow managers to take time off or to work part time. Supporters of these policies argue that they benefit women with children, while opponents fear that they marginalize women in lower-paid tracks. It is interesting to see if women who are now senior managers ever spent time as homemakers or worked part time.

Only one respondent (fig. 1, cluster 4, case 20) spent at least a year as a full-time homemaker, and that was before she began her finance career. Only two respondents worked part-time after launching finance careers. One woman (cluster 3, case 4) works in a financial services firm that she describes as very supportive and that continued to promote her despite her part-time status. She enjoys a rapid career pace in part because the firm did not penalize her for working part-time and in part because the firm is growing. The other part-timer (cluster 3, case 17) says her financial services firm has a history of hostility toward women. She faced a decided lack of support from the firm at the news of her pregnancy and at her request to work four days a week after her daughter was born. Her career pace is just below the sample median.

With very few exceptions, labor force interruptions and part-time work are simply not part of the career tracks of this sample of women at senior levels. Executive finance careers apparently do not easily tolerate spells out of the full-time labor force. Respondents with children repeatedly said that most of their friends who are mothers had left similar jobs to raise their children. The decision to work part-time or take time off is a difficult one, and most women believe that their careers would suffer if they relinquished their full-time commitment to their employers.

Entrepreneurs.—Cluster 5 in figure 1 groups entrepreneurs. Three of

the six cases are *long-term* entrepreneurs; they started their own businesses in the 1970s and early 1980s. The other three cases are *recent* entrepreneurs who started firms in the late 1980s and early 1990s. Three additional women in other clusters are also recent entrepreneurs.[14]

The recent and long-term entrepreneurs described different motives for starting their own firms. All three long-term entrepreneurs stated that they founded their own businesses for a combination of two reasons: to get around sex-based hurdles in large organizations and to create the flexibility to accommodate child care or a husband's geographical preference. For example, in 1976, one long-term entrepreneur (cluster 5, case 51) said she was forced to leave a large public accounting firm after marrying a colleague. The firm did not allow married couples both to be on staff and assumed that she rather than her husband would leave. She decided to start her own business at home where she says "she could start a family and still keep active in the profession."

In contrast, the six recent entrepreneurs told me that they disliked large corporate bureaucracies for reasons unconnected with gender-based barriers or family. They founded businesses in the pursuit of autonomy, productive work, and profit.

To illustrate, one recent entrepreneur (cluster 5, case 29) discusses the contrast between her former job in a Fortune 500 company and her new job as cofounder of a small business.

> It was appealing to get away from the stupid, fruitless memos and meetings. I'd just had it with the corporate world. No one was looking at the big picture. There were just pathways of paperwork. People wanted things done the way they'd always done them. They didn't care about seeing results. . . . [In my own firm] I haven't written a memo yet. You don't have 10 people posturing and defending their territory. You can see immediate results of anything you do, without going through 20 levels of bureaucracy and red tape. . . . The connection between what I do and the bottom line is so direct here. It's really entrepreneurial. My personal financial success is directly connected to the success of the company, which is directly connected to my work.

This contrast between long-term and recent entrepreneurs underlines the importance of time in women's self-understandings of their careers. Many women starting finance-related firms 15 or more years ago said they were trying to bypass gender-based barriers to their advancement in large companies and to accommodate their families' needs. In contrast, women

[14] Cluster-5 long-term entrepreneurs are cases 39, 51, and 28, and the recent entrepreneurs are cases 25, 9, and 29. Other entrepreneurs are cases 3 and 19 (cluster 1) and case 6 (cluster 2). Most of their careers resemble the other careers found in clusters 1 and 2.

launching finance-related businesses more recently report they are motivated by the desire to escape bureaucracies and to create new business opportunities. Ostensibly similar career steps can have different meanings depending on when the steps occur.

It is interesting that the career slopes of the recent entrepreneurs (median 0.89, mean 0.96) are almost identical to the slopes of the long-term entrepreneurs (median 0.80, mean 0.96) and similar to the career slopes of the sample as a whole (median 0.93, mean 0.98).[15] The career slopes do not support the interpretation that more senior entrepreneurs had actually faced more restricted career opportunities or slower advancement than had new entrepreneurs. Yet the long-term entrepreneurs interpreted career opportunities and barriers differently than did recent ones.

In sum, factors distinguishing clusters include firm ILMs, turbulence, geographic mobility, the boundary separating jobs outside and inside the finance labor market, and entrepreneurship. These factors are interrelated in their effect on career trajectories. Respondents who climb ILMs in one or two large organizations are somewhat insulated from environmental turbulence; these corporate climbers are concentrated in clusters 1 and 2. Cluster 3, the big fish in small and medium-sized organizations, contains careers that have experienced more turbulence and more mobility among firms and have reached fairly high levels in small and medium-sized firms. Cluster 4 groups careers with even more environmental turbulence and more frequent employer change. These characteristics are correlated with the risky financial services industry and with geographic restrictions. Cluster-4 respondents are successful risk takers, the movers and shakers of the sample. Cluster 5 contains the entrepreneurs.

The remainder of the article focuses on female executives' new opportunities, beginning in the 1970s, that crosscut the factors such as firm size, turbulence, and geographic mobility that shaped career types. The first section below discusses industry changes that I assume affected both female and male managers' careers. The following section will then focus on legal and social changes that specifically benefited *female* managers in finance.

CHANGES IN OPPORTUNITY STRUCTURES

Changes in Finance-Related Industries

We have seen that over a third of the sample encountered environmental turbulence; this turbulence particularly affected careers in financial ser-

[15] I measure the career slopes of entrepreneurs up until the point in time when they formed their own businesses.

vices.[16] In addition to financial service firms (including investment banks, brokerage firms, and financial consulting firms), commercial banks, public accounting firms, and other finance-related businesses faced global challenges that eroded profit margins in the 1970s and early 1980s. I expect that the increased competition and volatility during this period would have constricted career opportunities for female and male managers in finance-related fields.[17]

The 1970s and early 1980s were plagued by high, volatile interest rates and a sluggish stock market. This was also a period of increasing globalization, deregulation, and competition. Commercial banks lost money on loans made to developing countries hit by high energy prices and high inflation. Investment bankers reeled when deregulation opened up price competition on broker fees. In short, commercial and investment banks saw their profits shrink in the 1970s. Similarly, public accounting faced heightened competition in the 1970s and 1980s, which resulted in mergers of public accounting firms, slowing growth rates and dropping relative salaries. We will see that women's career pace accelerated in the 1970s and early 1980s *in spite of* these problems in commercial banking, financial services, and public accounting.

The 1980s continued to be difficult years for commercial banks, which lost their monopoly on demand deposits to savings and loan associations and ceded corporate loan market share to investment banks. There were an unprecedented number of bank mergers and acquisitions.

Investment banks also faced record numbers of failures, mergers, and acquisitions in the 1980s. But surviving investment banks were highly profitable between 1982 and the 1987 stock market crash. The mid-1980s were years of expanding product innovation, securities sales, globalization, and competition. We will see that these six years of expansion in financial services occurred after the increase in women's career pace had already begun and therefore cannot explain this increase. However, this expansion may have contributed to the acceleration in some women's advancement and also helps account for the timing of women's entrance into financial services. Of the 17 respondents who worked in financial services at some point in their careers, 15 entered this industry in the 1980s.[18]

[16] Sources for the industry trends discussed in this and the following two paragraphs are Altman (1987), Rose (1987), Gart (1988, 1989), Taylor (1991), Flynn et al. (1995), Useem (1996), and Stearns and Allan (1996).

[17] A study of male finance-executive careers is beyond the scope of this paper. I am currently conducting research on this population.

[18] The concern that industry expansion created the increase in career pace might apply to corporate law firms, which expanded in the 1970s through the late 1980s (Epstein

Increased Opportunities for Women

This section shows that in spite of economic contractions and volatility in commercial banking, financial services, and public accounting, opportunities for female managers in finance-related fields increased after the early 1970s. This advancement is in large part due to dramatic legal and social changes that dismantled some of the explicit barriers to women's mobility.

Congress passed legislation protecting women's employment rights in the 1960s, but this made little difference to employed women until the early 1970s. For example, Title VII of the Civil Rights Act of 1964 provides the federal basis for protection from employment discrimination based on race, sex, and other criteria. However, the Equal Employment Opportunity Commission (EEOC) initially lacked any intention to protect women's rights and ignored complaints of sexual discrimination (Mills 1994). In response to this disregard, Betty Friedan and two dozen others founded the National Organization of Women (NOW) in 1966 (Ferree and Hess 1985; Freeman 1973). By the early 1970s, women's groups successfully pressured the federal government to enforce the laws against sexual discrimination. The EEOC and the courts gradually insisted that employers hire women into traditionally male occupations (Costain and Costain 1987; Cancian 1981; Kessler-Harris 1994). For example, the EEOC collected data on and filed lawsuits against some banks (Ashenfelter and Hannan 1986; see also Reskin and Hartmann 1986).

Respondents discussed how these changes affected their own careers. Some were in the first sex-integrated cohort of management trainees. Others said they were promoted because of EEOC pressure. For example, one respondent who joined a very large bank in the early 1970s noted that "commercial banks were in the forefront of promoting women; they were under much more EEOC pressure." She elaborated that the increase in women's career opportunities was "an EEOC issue; it was not just a demand issue."

We might therefore expect that respondents' careers will reveal a period effect in the early to mid-1970s. The data reveal distinct shifts in the distributions of three indicators. The indicators are: (*a*) the number of women entering the finance labor market (including business school) each year, and two subsets of (*a*): (*b*) the number leaving nonfinance jobs to enter finance; and (*c*) the number entering full-time MBA programs. There was a sharp increase in the rates of all three factors from the pre-1970 period to the 1970–73 period. The rate of women entering finance from non-

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1993; Curan and Carson 1988). I deleted the seven respondents who worked in law firms from the slope calculations and found virtually identical results.

finance jobs went down slightly after 1973. But the other two indicators rose again from the 1970–73 period to the 1974–80 period. Taken together, the three indicators suggest a shift from the first (1960–69) to the third (1974–80) period, with the second period (1970–73) as a transitional period between them.

National events support the data's picture of a watershed between 1970 and 1973. In 1970, the EEOC finally signaled seriousness in applying Title VII to sexual discrimination by bringing suit against the American Telephone and Telegraph Company (AT&T), the largest private employer of women in the country, for sexual discrimination. A consent decree stipulated affirmative action at AT&T and $15 million in back pay to female employees (Crothers 1973). In 1973 and 1974, consent decrees were negotiated with several other large employers, including the Bank of America (Ashenfelter and Hannan 1986; see also Reskin and Hartmann 1986).

An exponential increase in NOW membership and in media coverage of the women's movement was also marked in 1970 (Cancian and Ross 1981; Freeman 1987). In 1972, Congress passed the Equal Rights Amendment as well as Title IX of the Higher Education Act, which prohibited sexual discrimination in school admissions. There was a concurrent surge in female enrollment in business and business schools that prepared the way for women's subsequent movement into high-paying, male-dominated, business and professional occupations (Cancian 1981; Shu and Marini 1998). Furthermore, "1970 marked the turning point as massive demonstrations were held across the country on the fiftieth anniversary of women's suffrage. Women who had not been active before marched and picketed. . . . Feminist protests spread through the churches, the professions [and] academic disciplines" (Mueller 1987, p. 97).

By triangulating the distributions of my data indicators with watershed national events, we see that the years 1970–73 mark a distinct period in American women's history. In sum, the first period (1960–69) occurred before the women's movement became widespread and before the EEOC signaled its seriousness in policing sexual discrimination. The second period (1970–73) is a transitional stage marked by a sharp rise in the mass base and activism of the women's movement and by increased media attention. The third period (after 1973) occurred after these changes had begun to be institutionalized.

To capture any impact of this period effect on women's finance careers, I divide the sample into three finance cohorts. Finance cohorts are defined by the year a respondent began her finance career, including professional school. The first finance cohort began finance careers between 1960 and 1969, before the federal government enforced women's rights to equal opportunity in the workplace. The second finance cohort started finance careers during the transitional period of 1970–73. The third finance cohort

TABLE 3

MEDIAN AND RANGE OF CAREER SLOPES IN EACH FINANCE COHORT

	1 (1960–69)	2 (1970–73)	3 (1974–80)
Median	.66	.94	1.06
Mean	.69	1.01	1.06
Range	.46–.95	.71–1.45	.38–2.10
N in each finance cohort	10	11	35

NOTE.—Years in which cohorts entered finance labor market are given in parentheses.

started finance careers between 1974 and 1980. Note that members of the same finance cohort can be of different ages, as some people started finance careers directly after college, while others first worked in nonfinance jobs.

Career Advancement

The initial hypothesis is that the period in which a woman begins a finance career affects the subsequent shape of her career. To explore this, I first examine the rate of advancement over respondents' total finance careers (excluding spells outside of finance). Then I analyze advancement over finance-career segments during shorter time periods.

Overall career slopes.—The analysis of promotion rates over the total career uses a heuristic measure of career pace, the career "slope." Table 3 shows a distinction between the slow-paced, shallow ascent of the first finance cohort (median slope 0.66, mean 0.69) and the faster career ascent of the second finance cohort (median 0.94, mean 1.01) and third finance cohort (median and mean 1.06). Overall, career slopes increased abruptly between finance cohorts 1 and 2 and remained fairly constant thereafter.[19] One explanation is that women starting finance careers in the second and

[19] A difference of means *t*-test showed that, as expected, the mean slope of the first graduation cohort was significantly lower than the mean second-cohort slope ($P \leq .01$) and lower than the mean third-cohort slope ($P \leq .01$). A one-way ANOVA test gave similar results. Since the distribution of total slopes was skewed to the left, I did a Kruskal-Wallis test, which also showed significant differences among the graduation cohorts ($P \leq .01$). A square-root transformation of the slopes created a more normal distribution. Statistical tests on the transformed slopes gave the same results as the untransformed slopes. Separately calculating the slopes of careers *reaching each job level* shows that *at each level* the slope range also increased between cohorts 1 and 2 but remained similar across cohorts 2 and 3. The issue of right truncation and the career slope is addressed in the section on "the right-truncation problem," below.

third periods advanced more quickly because the EEOC began pressuring companies to promote women in the early to mid-1970s. This interpretation aligns with the historical discussion of the women's movement and Title VII, and it is supported by the interview data presented below.

The next section will show that these cohort differences between overall slopes are partly due to career age effects (seniority). We will also see evidence of a period effect: on average, finance cohorts 2 and 3 have faster advancement than finance cohort 1 across each career stage.

Slopes of career segments.—To more closely examine the interrelated effects of age, period, and cohort, I divided the overall careers into career segments corresponding to particular time periods. Ideally, these periods would be small enough to isolate the period of theoretical interest: 1970–73. However, the division of careers into four-year segments (e.g., 1966–69, 1970–73, 1974–77, etc.) was empirically too small to see mobility. A majority of careers showed no change (a zero slope) during most periods of just four or five years.

Ensuring that the majority of careers in a given period would have been promoted during the period required longer career segments. I compared the finance-cohort slopes across career segments during five overlapping time periods that each lasted about a decade: prior to 1970–75, 1970–80, 1975–85, 1980–90, and 1985–94. Table 4 presents the median slopes of 12 career segments, which are each composed of distinct cohorts across each time period. (The mean slope of each career segment is similar to the median). Although the cells of this table are very small, they reveal period, age, and cohort effects.[20]

Period effects emerge when we compare the medians of career-segment slopes of the same finance cohort across the different time periods. Career segments 1, 2, 3, 4, and 5 track the career-segment slopes of the first finance cohort over the five time periods. The first finance cohort had the lowest median career segment slope, 0.16, during the earliest period (before 1970–75, career segment 1). The first cohort median career pace increased across the next two time periods, peaked at 0.73 during the 1975–85 period (segment 3), then leveled off and dropped.

In the first decade of the second finance-cohort's careers, 1970–80, careers show a median slope of 0.50 (career segment 6). By 1975–85, the median pace had peaked at 1.09 (segment 7). Thus both the first and second finance cohorts experienced heightened mobility between 1975 and 1985. This is consistent with my argument that legal and social changes of the early 1970s began to dismantle explicit gender barriers to women's advancement in finance. As business schools reckoned with Title IX,

[20] One-way ANOVA tests showed statistically significant difference of means among career segment slopes ($P \leq .001$).

TABLE 4

SLOPES OF CAREER SEGMENTS BY FINANCE COHORT*

Career Segment	Finance Cohort	*N* Careers in Segment	Time Period	Median Slope of Careers in Segment†	Shift in Median Slopes across Career Segments
1	1	10	<1970–75	.16	
2	1	9	1970–80	.45	from segment 1 to 2: .29
3	1	9	1975–85	.73	from segment 2 to 3: .28
4	1	9	1980–90	.73	from segment 3 to 4: 0
5	1	8	1985–94	.40	from segment 4 to 5: −.33
6	2	11	1970–80	.50	
7	2	11	1975–85	1.09	from segment 6 to 7: .59
8	2	10	1980–90	.86	from segment 7 to 8: −.23
9	2	7	1985–94	0	from segment 8 to 9: −.86
10	3	34	1975–85	.48	
11	3	34	1980–90	1.09	from segment 10 to 11: .61
12	3	32	1985–94	.80	from segment 11 to 12: −.29

* Finance cohort 1 members entered finance before 1970, finance cohort 2 entered finance between 1970 and 1973, and finance cohort 3 entered finance between 1974 and 1980. Each career segment excludes any respondents who were entrepreneurs at the starting or ending date of the time period, as I was unable to calculate their career-segment slopes.

† Mean career slopes of each segment create the same pattern.

women began flooding into MBA programs in the early 1970s. As banks and other financial services firms began responding to the enforcement of Title VII as newly applied to women, their management training programs became sex integrated.

In addition to this period effect, we can also see the inverted U-shaped effects of career age or seniority.[21] Table 4 shows that all three finance cohorts increase the pace of mobility after the first five years. This acceleration of career pace with career age peaks at midcareer (segment 3 for the first finance cohort, segment 7 for the second cohort, 11 for the third cohort) and then levels off and declines with seniority. This is probably because the hierarchical structure of firms limits opportunities as employees approach the apex of the organizational hierarchy (cf. Stewman and Konda 1983).

Career pace shows the effects of period as well as career age. The first finance cohort starts out more sluggishly (median slope 0.16) than the second and third cohorts start out (median slopes 0.50 and 0.48). Moreover, the first cohort never accelerates as quickly (median slope 0.73, career segment 3) as the second and third finance cohorts (median slope 1.09, segments 7 and 11). Through almost every stage of seniority, median and mean career pace for the first finance cohort lag behind the younger cohorts. First finance-cohort members continue to pay a penalty for gatecrashing finance-related managerial occupations before the doors had officially opened to women.

As discussed earlier, the first and second cohorts both accelerated fastest during the 1975–85 period (career segments 3 and 7). This is due to the combination of period and age effects. These career segments showed the highest mobility because they had the dual advantage of following the early 1970s watershed and being the segments of mature careers.

A competing explanation for third cohort members' rapid career advancement is that they are more valuable employees than women in the earlier cohorts. Since the enforcement of Title VII and Title IX created new openings for women in business schools and organizations, there were more women competing for finance-related jobs in the 1980s than in earlier decades. The third finance cohort is a more selective sample than the earlier cohorts in the sense that its members beat out more female competitors for high-ranking jobs (cf. Kanter 1983).

Yet there are two problems with this explanation. The second finance cohort advances, on average, just as quickly as the presumably more com-

[21] Recall that career age is different from chronological age, since respondents were of different ages when they began their finance careers. The section on "converging careers," below, considers cohorts as defined by chronological age, specifically by college graduation date.

petitive third cohort. Moreover, the first and, to a lesser extent, the second finance cohorts are selective in another way: they created opportunities for themselves when institutionalized access to managerial finance jobs was almost nonexistent for women. Although the third finance-cohort respondents competed with more women for jobs in the finance labor market, second- and especially first-cohort members had to fight to create those jobs.

Affirmative Action, Period, and Cohort Effects

The new attention to women's employment rights in the early 1970s affected respondents differently, depending on when their finance careers began. First finance-cohort women began finance careers before institutional channels into finance careers were sex-integrated. They had somehow convinced large firms to hire them and had then accumulated several years of experience by the time the EEOC began pressuring large companies to promote more women.[22] In the early 1970s, first finance-cohort respondents were thus positioned finally to receive their first significant promotions. Second finance-cohort women, who launched finance careers between 1970 and 1973 found affirmative action helped them gain access to business and law school and to entry-level finance positions.

Older members of the third finance cohort, especially those who first worked in other fields, said that the women's movement influenced their decision to go into finance; some found affirmative action measures important in opening entry-level finance positions. In contrast, younger third-cohort women took access to business school and finance jobs for granted. Most did not expect or perceive any limits to their advancement, although some women encountered sex-based barriers after they had reached senior levels. The interviews illustrate these time-dependent patterns. (All names are pseudonyms.)

First finance-cohort women gained unorthodox entry into finance ILMs in the 1960s and then benefited from affirmative action in the 1970s. Louise Gelb started a clerical job at a very large bank in 1960, made herself indispensable, and then threatened to quit if she were not moved into a finance-related job. Her "back-door" entry into the firm ILM allowed her to benefit from the company's later concerns about affirmative action. In 1974, she was the first woman promoted to assistant vice president in accounting. She discusses this transition: "It was a major career step. The

[22] First-cohort women are overrepresented in the first and second clusters, the climbers of ILMs in big firms.

time was ripe for women to be looked at. I was visible in the bank and in the community. Other senior officers were aware of me. It was an opening."

Similarly, Shari Roberts describes how she got a clerical job in a large manufacturing company in 1961 and fought hard to break into management: "When I first started with the company in 1961, women only did clerical work. . . . In 1966, I threatened to leave. I had three other job offers. I was not going anywhere at my company. Then they promoted me to administrative services managers. They met the other offers, and I stayed. Percent-wise, it was a sizable salary increase." Once in the ILM, affirmative action finally allowed her to be promoted: "Title VII became important in the early 70s. The company suddenly had an EEOC manager in 1974. In 1974, I was promoted. They looked for women with [college] degrees, and they found two. I was one. In an interview with the treasurer, I asked, 'Why me?' He said, 'If I said it wasn't because you are a woman, I'd be lying.' Being female cuts both ways. . . . In the early 70s, women had to be excellent. When the time comes when average women are allowed to achieve in the workforce, we will have progressed a long way."

Louise Gelb, Shari Roberts, and most other first finance-cohort members found a back-door entrance into a finance ILM. They maintain that the women's movement had helped open workplace barriers after they had already gained some experience in the finance labor market.

In contrast, second finance-cohort women credit the women's movement and affirmative action for helping them *enter* the finance labor market in the early 1970s. Many were pioneers in finance positions and benefited from—and actively contributed to—the continuing pressure to promote women throughout the 1970s. Most second finance-cohort members thought the women's movement had been pivotal in directing their attention toward the finance labor market and in sex-integrating professional schools and management training programs. For instance, Liz Frank, who attended business school from 1972 to 1974, found that "being a female was a plus for getting into graduate school. The business schools were just starting to recruit women."

Lisa Mignetti became one of the first two female management trainees in a commercial bank in 1970, when the bank began responding to EEOC guidelines. Although legal pressure got her into the company, she had to struggle for advancement. She discusses gender difference in income and promotion pace: "It was the first year companies were under pressure to hire women. . . . I was hired for $8,200, which I thought was a lot of money. Then I found out that the male management trainees were paid $8,600. . . . I kept getting put in charge of silly special projects. In 1971, they made me in charge of bank parties. . . . It's supposed to take two

years [to become an officer]. But because I kept getting stuck in dumb jobs, it took me four years. . . . I complained a lot. . . . Everyone my age has these tales."

Several years later, Mignetti again discovered that the bank was paying her less than her male colleagues. This time she threatened a lawsuit and negotiated a 50% pay raise. Shortly thereafter, she joined a very large manufacturing company and in 1982 became its first female corporate officer. She says, "I was elected the token woman VP. The men at my level gave me a bus token."

Several older third finance-cohort women started finance careers between 1974 and 1980 after working in other fields. They credited the women's movement for directing their attention to finance-related careers. They recognized a changing regime, which gave women new opportunities.

For example, Dorothy Jones graduated from college in 1969, taught elementary school for a few years, and then decided to enroll in business school. She remarks, "All of a sudden there was a lot of demand for women in business. The Civil Rights Act helped. . . . There were only 13 women in the whole MBA program at the time [1974–76]. . . . Women were hired right away. They got multiple offers."

Harriet Simpson is another older third finance-cohort member who held nonfinance jobs before launching a finance-related law career in 1975. She maintains that a law career had not been a structural or a psychological option for her when she graduated from college in 1966.

> [In the early 70s,] I started seeing myself as someone who would be working for the rest of my life. I thought about maneuvering myself for the job with the best rewards and the most pleasure. With proper career counseling, I would've been a likely candidate for law school out of college [in 1966]. But no one even suggested it. . . . The feminist movement has been very important. If I had graduated from college four to five years later, I would have gone straight to law school. . . . To the extent I started thinking of myself differently, things never would've occurred to me without the women's movement.

Simpson's remarks support my delineation of a watershed between 1970 and 1974. Not only workplace structures but also women's aspirations changed dramatically in a small amount of time. Changing structures enabled some women to form new understandings of the social world and themselves (cf. Shu and Marini 1998).

Younger third finance-cohort members entered finance between 1974 and 1980 immediately after college. They generally took their admittance into law or business school or into entry-level finance jobs for granted. Many did not believe that the women's movement was relevant to their

personal success.[23] Some third-cohort women said they had never encountered sex-based barriers to advancement; others said they confronted such hurdles only after reaching senior levels.

Cornelia Urbach, who entered a very large accounting firm in 1975, said that initially "the door was wide open for me." However, her smooth advancement stopped after she became a partner in the late 1980s. She remarked, "There is a glass ceiling, big time. I definitely have the potential to develop, but because of politics and because the world of my peers is male dominated, I am pigeonholed and restricted from developing my fullest potential. The glass ceiling shows up at different levels, for different people. I didn't hit it until I became a partner. As long as you are talented, there's opportunity, but only if the men are willing to give it to you. They have a limit to how far they let you go." Urbach finds herself blocked from pursuing certain business opportunities by what she perceives as subtle yet persistent gender discrimination.

Amy Peterson, another third finance-cohort member who entered a very large firm in 1977, also found her advancement stalled when she reached the level of partner. She attributes this to an increasing industry-wide competition and resulting heightened competition for clients among firm partners. She argues that male senior partners tend to be more comfortable mentoring other men (cf. Kanter's [1977] "homosocial reproduction"). "I think the advantage men have is people like being around people that are like them. And so you get your senior partners who can relate much more easily to the men and so there's much more mentoring going on. . . . Maybe if I had been male all along, I would have had mentors that were making sure I was protected. . . . And making sure I was developing smaller clients I could keep [after I made partner]." Peterson's lack of guidance and personal ties to powerful partners left her vulnerable in an increasingly competitive environment.

While Cornelia Urbach and Amy Peterson found their advancement curtailed after reaching a senior position in the firm, other third finance-cohort members have yet to feel any limit to their success or to encounter substantial gender discrimination. Martha Ungvarsky finished college and joined a financial services firm in 1980, where she is now chief financial officer. She says she has never encountered sexism at the firm: "They always treated me the same as everyone else. . . . As long as you can do the job, they'll give you the opportunity."

Ungvarsky believes that expecting discrimination helps create it. Al-

[23] One younger third-cohort member, now a partner in a very large public accounting firm, stated: "The women's movement was not an influence in my life. It was irrelevant, and I did what I wanted to do."

though she acknowledges that her firm may be unusually enlightened, she sees no reason why women with enough "mental toughness" cannot be successful. "If I had expected discrimination, I would have been resentful. I'd have had a different attitude and wouldn't have worked as hard. . . . You do see successful women. How does that happen? It takes a certain mental toughness to deal with it and not let it affect you. I've had people look at my legs during meetings. I just ignore it and go on. . . . I attribute my success to hard work, to a lot of time and effort. Whatever I did, I'd be successful at it."

For Ungvarsky, overcoming sex-based hurdles is a matter of keeping a positive attitude. In contrast, many first and second finance-cohort members fought sex-based barriers with threats to quit and legal action. Given the different historical context in which they launched their careers, first and second finance-cohort members lack Ungvarsky's faith that personal abilities translate easily into career success. The first and second cohorts' aggressive action contributed to changing workplace structures; the altered, less discriminatory structures in turn shaped the third cohort's perspective and sense of identity.

The impact of affirmative action depended on when women launched their finance careers. The next section shows that the legal and social transformations of the early 1970s particularly structured the careers of the youngest female executives, those who finished college after 1973.

Converging Careers

Although almost half the respondents began their work lives outside the finance labor market, this pattern is almost completely restricted to women who graduated from college in the first or second period. The disappearance of female-dominated and other nonfinance work in successful women's finance careers is linked to the early 1970s period effect. We see this if we divide the sample into three college graduation cohorts that left college and began full-time employment, inside or outside the finance labor market, during the first, second, and third periods.

The first college-graduation cohort includes women born between 1934 and 1947 and who finished college between 1956 and 1969 ($N = 24$). The second college-graduation cohort was born between 1948 and 1951 and finished college between 1970 and 1973 ($N = 12$). The third graduation cohort was born between 1952 and 1959 and completed college between 1974 and 1980 ($N = 20$). (A college-graduation cohort is the same as a birth cohort and is distinct from a finance cohort, as finance cohort members may be of different ages.) The proportion of women leaving college to work outside of finance for more than a year declines in each graduation cohort, from 15 out of the 24 first graduation-cohort members (63%) to

seven out of the 12 second graduation-cohort respondents (58%) to just two out of the 20 third graduation-cohort members (10%). By the third period, working outside the finance labor market is no longer part of the pattern of successful women's finance careers.

Figure 2 reorders the career sequences in figure 1 by age and divides them into the three college-graduation cohorts. Vertical lines demarcate the watershed second period, 1970–73. While over half of the first and the second graduation cohorts began in female-dominated or other nonfinance jobs (coded "fe" and "nf"), only two of the third graduation-cohort careers (cases 22 and 4, starred) began outside finance.

For most third-cohort graduation members, the specialization in finance actually began earlier, during college. Of third-cohort members, 75% majored in business, economics, accounting, or a related field. In contrast, only 40% of the first graduation cohort and 33% of the second graduation cohort had college majors in business-related specialties.

Of course, there could exist a group of much younger women or a group of late bloomers who are doing or did other jobs before launching finance careers and may yet reach senior levels. The next section examines the issue of right truncation and potential late bloomers. But preliminarily, it seems that in contrast to older women who might be teachers or social workers before pursuing successful finance careers, younger women may be on an unyielding track that demands specialization in finance immediately after college.[24]

If the hypothesis that respondents' careers are growing increasingly rigid is to be supported, we should be able to see it in the optimal matching clusters. Consider again figure 1, which shows female finance executives' five distinct career types. Within each of the five clusters, the longer careers at the top are from the first graduation cohort. The middle-length careers that start at some point between the two vertical lines, between 1970 and 1973, are from the second graduation cohort. The short careers at the bottom of each cluster and that start after the second vertical line, after 1973, belong to the third graduation cohort.

If women's careers really are becoming more rigid, we would expect the clusters to be growing more homogeneous: to be coalescing over time. In other words, within each cluster, the distances between careers generated by the optimal matching algorithm should be smaller for the younger respondents.

[24] I do not suggest that all women's finance careers now look like men's. My sample analyzed here is restricted to women who have reached high levels. Among full-time managers, women are vastly underrepresented in senior management. And many female managers leave their careers or shift to part-time work in order to care for families, as my related research is investigating.

First college graduation cohort (b. 1934-47; finished college 1956-69; N = 24).

CASE	DATE	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	8S	83	84	85	86	87	88	89	90	91	92	93	94
40.		fe	fe	nf	nf	nf	fe	fe	fe	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	4L	5L	5L	5L	5L	5L	5L	5L	6L	6L	6L	6L
15.		fe	fe	fe	fe	fe	fe	fe	fe	fe	fe	fe	fe	fe	fe	fe	fe	4S	4S	4S	4S	4S	4S	4S	4S	4S	4M	4M	6M	6M	6M	6M	6S	6M	6M	6M	6M	6M	6M	6M
10.						4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	5V	5V	5V	5V	5V	6V	6V	6V	6V	6V	6V	6V	7S	7S	7S	7S	8S	8S	8S	8S	8S
32.						4V	4V	4V	4M	5M	5M	5M	5M	5M	5M	6M	6M	6M	5V	5V	5V	5M	5M	5M	5M	6M	6M	6M	6M	6M	6M	7M	7M	7M	7M	7M	7M	7M	7M	7M
25.							ps	ps	ps	5S	5S	5S	5S	5S	5S	6S	6S	6S	6S	6S	6S	6S	6S	6S	6S	7M	7M	7M	7M	7M	8M	8M	en	en	en	en	en	en	en	en
39.									nf	nf	nf	nf	nf	nf	nf	nf	nf	nf	nf	nf	nf	4V	en	en	en	en	en	en	en	en	en	en	en	en	en	en	6M	6M	en	en	en
43.										fe	fe	fe	fe	fe	fe	fe	fe	fe	fe	ps	ps	ps	4L	4L	4L	4L	4L	4L	4L	5L	6L	6L	6L	5L	5L	5L	5L	5L	5L	5L
3.										nf	nf	nf	nf	nf	nf	nf	nf	4V	4V	5V	5V	5V	5V	5V	5V	5V	5M	nf	7L	7L	7L	7L	7L	7S	7S	7S	7S	en	en
20.											fe	fe	fe	fe	fe	fe	4V	4V	4V	4V	4V	4V	4V	6V	6V	6V	7M	7M	7M	7M	7M	7M	7M	7L	7L	7L	7M	7M	7L	7L
16.												fe	fe	fe	nf	nf	nf	nf	nf	nf	nf	nf	nf	nf	nf	nf	ps	ps	4M	4M	4V	4V	4V	5V	5V	5V	5V	5V	5V	5V
13.												fe	fe	fe	fe	4M	4M	4M	4M	4M	4M	4V	4V	5S	5S	5S	5S	5S	5S	5M	5M	6M	6M	4M	4M	4M	4M	5M	5M	5M
47												nf	fe	fe	fe	fe	fe	fe	nf	nf	ps	ps	ps	4L	4L	4L	4L	4L	4L	5L	6L	6L	6L	6L	6L	6L	8L	8L	8L
1.												fe	fe	nf	nf	fe	fe	fe	fe	ps	ps	4L	4L	4L	4L	4L	5V	5V	5V	6V	6V	6V	6V	6V	6L	6L	6L	6L	6L	6L
41.												ps	ps	nf	nf	nf	4L	4L	4L	4L	4L	5L	5L	5L	5L	5L	5L	5L	5L	6L	6L	6L	6L	6L	6L	6L	6L	6L	6L	6L
12.														nf	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	4V	5V	5V	5V	5V	5V	5V	5V	5V	6V	6V	6V	6V	6V
2.														4M	4M	4M	4V	4V	4V	4V	4V	4V	4V	4V	5V	5V	5V	6V	6V	6V	6V	6V	6V	6V	7V	7V	7V	7V	7V	7V
34.															fe	fe	fe	fe	fe	fe	4V	4V	4V	4V	4V	5V	5V	5V	5V	5V	5V	6V	6V	6V	7V	nf	7M	7M	7M
26.															4V	4V	4V	4V	4V	4V	5V	5V	5V	5V	5V	5V	5V	6V	6V	6V	6M	6M	7M	7M	7M	7M	5M	5M	7M	5M	5V
50.															nf	fe	fe	fe	nf	nf	nf	nf	nf	ps	ps	ps	4M	4M	4M	4M	4M	5M	6M	6M	6M	6M	7M	7M	7M	7M	7M
51.															ps	4V	4V	4V	4V	4V	5V	5V	en	en	en	en	en	en	en	en	en	en	en	en	en	en	en	en	en	en	en
36.															fe	fe	fe	ps	ps	4L	en	en	en	4M	5M	5M	6M	7M	7M	7M	7M	7M	7M	7M	7S	7S	7S	7S	7S	7S
46.																ps	ps	ps	4L	4L	4L	4L	5M	6M	6M	6M	6M	6M	6M	6M	6M	6M	7V	7V	7V	7V	8V	8V	8V	8V	8V
27.																fe	fe	fe	fe	fe	ps	ps	ps	4M	4M	4M	4M	4M	4M	4L	4L	4L	4L	5V	5V	5V	6V	6V	6V	6V	6V
28.																nf	nf	4V	4V	4V	5V	5V	5V	5V	5V	6V	6V	en	en	en	en	en	en	en	en	en	en	en	en	en	en	en

Second college graduation cohort (b. 1948-51; finished college 1970-73; N = 12).

```
19.                                  |fe fe fe fe|fe 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 4V 5V 6V 6V 6V en en en en
55.                                  |4V 4V 4V 4V|5V 5V 5V 6V 6V 6V 6V 6V 6V 7V 7V 7V 7V 7V 7V 7V 7V 7V 7V 7V
7.                                   |nf fe fe fe|fe nf nf nf nf 4L 5L 5L 5L 5L 5L 5L 5L 5V 5V 6L 6L 6L 6L 6L 6L
56.                                  |nf nf nf nf|nf nf nf nf nf nf 4L 4L 4L 4L 5L 5L 5L 5L 6L 6L 6L 6L 6L 6L 6L
6.                                   |nf 4L 4L 4L|4L 4L 4L 4L 4L 4L 5L 5L 5L 5L 5L 6L 6L 6L 6L 7M en en en en en
8.                                   |fe fe fe fe|fe 4M 4M 4M 4M 5M 5M 5M 5M 5M 5M 6V 6V 6V 6V 6V 8M 8M 8M 7V 7V
9.                                   |4M 4M 4M 4M|4M 4M 4M 4M 4M 5M 5V 5V 6V 6V 6V 6V 6V 6V en en en en en en en
52.                                  |      ps ps|ps 4V 4V 4V 4V 4V ps ps 4V 5V 5V 4L 4L 4L 5L 6L 6L 6L 6L 6L 6L 6L
23.                                  |      fe nf|nf nf ps ps 4V 5M 5M 5M 5M 5M 7M 7M 6L 6L 6L 6L 6L 7L 7L 7L 7L
14.                                  |         ps|ps 4V 4V 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 5V 6L 6L 6L 6L 6L
53.                                  |         nf|nf nf 4M 4M 4M 4V 4M 4M 5M 5M 5M 5S 5S 5V 5V 5V 5V 5V 5V 5V 5V
5.                                   |         nf|nf fe fe fe fe ps ps 4V 4V 4V 4V 7L 7L 7L 7L 8L 8L 8L 8L 8L 8L
```

Third college graduation cohort (b. 1952-59; finished college 1974-81; N = 20). Only two careers (starred) begin outside finance labor market.

```
45.                                                                  |4L ps ps 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 5V 5V 5V 5V
33.                                                                  |ps ps 4V 4V 4V 5M 5M 6M 6M 6M 6M 6M 6M 5V 5V 5V 5V 6V 6V 6V 6V
21.                                                                  |4L 4L 4L 4L 4L 4L 4L 4L 4L 5L 5L 5L 5L 5L 6L 6L 7L 7L 7L 7L 7L
48.                                                                  |   4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V 6V
44.                                                                  |   4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V 6V 6V 6V 6V 6V
54.                                                                  |   ps 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5L 5L 5L 5L 6L 6L 7L 7L 7L
22.*                                                                 |   fe fe fe nf nf 4M 4M 4M 4M 4M 4V 4V 4V 4L 5L 6L 6L 6L 7L 7L
11.                                                                  |   ps ps ps 4V 4V 4V 4V 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 6V 6V
18.                                                                  |      4V 4V ps ps 4M 4M 4M 4V 5V nf 5V 5M 5M 5M 5M 5M 6M 6M 6M
29.                                                                  |      ps 4M 4M 4M 4V 4V 4V 4V 4V 4V 4V 4V 5V 7S 7S en en en en
30.                                                                  |      4M 4M 4M 4L 4L 4L 4V 4M 4M 5M 5M 5M 5M 5M 6M 6M 6M 6M 7M
49.                                                                  |         ps 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V
42.                                                                  |         ps ps ps 4V 4V 4V 4V 4V 5V 5V 5V 5V 5V 6V 6V 6V 6V 6V
24.                                                                  |         4M 4M 4M 4M 4M 4V 4V 5V 5V 4M 4L 5L 5L 5L 5L 5L 5L 5L
38.                                                                  |            4M 5M 5M 5M 5M 5M 6L 6L 6L 6L 7M 7M 7M 7M 7M 7M 7M
4. *                                                                 |            nf nf ps ps 4M 4M 4M 5M 5M 5M 5M 6M 6M 6M 6M 7M 7M
37.                                                                  |               ps ps 4V 4V 4L 4L 4L 4L 4L 5L 5L 5L 5L 5L 5L 5L
17.                                                                  |               ps ps 4V 4V 4V 4V 4V 4V 4M 5M 5M 5M 5M 5M 6M 6M
31.                                                                  |                  ps ps 4V 4V 4V 5V 4V 4V 5V 5V 6V 6V 6V 6V 6V
35.                                                                  |                  4S 4S 4S 4M 5M 5M 5M 6M 6M 7M 7M 7M 7M 7M 7M

DATE  56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94
```

FIG. 2.—Job and organization size sequences from figure 1 ordered by college graduation cohort

TABLE 5

INTERSEQUENCE DISTANCES WITHIN GRADUATION COHORTS, WITHIN CLUSTERS

	MEAN INTERSEQUENCE DISTANCES			
CLUSTER	Within Cluster	Among First Graduation-Cohort Careers	Among Second Graduation-Cohort Careers	Among Third Graduation-Cohort Careers
1	.43 (19)	.52 (7)	.61 (4)	.29 (8)
2	.41 (7)	.41 (2)	.45 (3)	.38 (2)
3	.51 (9)	.57 (3)	NA (1)*	.49 (5)
4	.63 (15)	.64 (8)	.66 (3)	.57 (4)

NOTE.—*N*s are given in parentheses.

* The mean intersequence distance could not be calculated because cluster 3 has only one second-cohort career.

I explore whether careers are coalescing by using the intersequence distances calculated by the optimal matching algorithm to find the mean distance within each cluster (see fig. 1). Then I separately calculated the mean distances between each of the three graduation cohorts within each cluster. For example, in cluster 1, the corporate climbers in very large firms, I first calculated the mean distance of all the corporate climbers in very large firms from one another. Then I separately computed the mean intersequence distance among the seven long first-cohort careers at the top, the mean intersequence distance among the four second-cohort careers, and the same among the eight short third-cohort careers that are at the bottom of cluster 1.

To garner support for the rigidity hypothesis, we would need to find that the mean distance among the first graduation-cohort careers and that among the second graduation-cohort careers should be greater than the overall cluster mean, while the mean distance among the third graduation-cohort careers should be less than the cluster mean. These distances are all reported in table 5. The top row of table 5 presents the distances in our first cluster, the corporate climbers in very large firms. The mean intersequence distance among all 19 careers in cluster 1 is 0.43. As predicted by the rigidity hypothesis, the mean intersequence distance among the first graduation cohort (0.52) and that among the second graduation cohort (0.61) are both greater than the mean intersequence distance of the overall cluster (0.43). Again as predicted, the mean intersequence distance among the third graduation cohort is just 0.29, a smaller mean distance than that within cluster 1 overall.

Table 6 summarizes the relationship between the overall cluster mean intersequence distance and the intersequence distances within cohorts in

TABLE 6

SUMMARY OF TABLE 5: INTERSEQUENCE DISTANCES OF GRADUATION COHORTS, WITHIN CLUSTERS

CLUSTER	GRADUATION COHORT*		
	1	2	3
1	GT	GT	LT
2	EQ	GT	LT
3	GT	NA	LT
4	GT	GT	LT

* GT indicates that the graduation cohort's intersequence mean distance is greater than the cluster's mean intersequence distance. LT means that the cohort's intersequence mean distance is less than the cluster's mean intersequence distance. EQ indicates a graduation-cohort intersequence mean distance equal to the cluster's.

clusters. The rigidity hypothesis finds a great deal of support. Within clusters 1, 3, and 4, the older cohorts have mean intersequence mean distances greater than (GT) the overall cluster mean, while the third cohort's mean distance is less than (LT) the overall cluster mean. This pattern only varies in the case of cluster 2, in which the first graduation-cohort intersequence mean distances are actually equal to the overall cluster mean, while the second- and third-cohort distances show the predicted pattern.[25]

These findings are exploratory. The numbers in the cells of table 5 are small, the sample is nonrandom, the differences between mean distances are not always large, and these careers are right truncated. However, the pattern is striking (and is statistically significant in the larger clusters 1 and 4). My respondents' careers fall into five distinct trajectories, which are shaped by occupational and organizational factors. Within each trajectory, the careers of mid–baby boom women finishing college after 1973 are more similar to one another than are the careers of their older female colleagues. Within the pathways dictated by organizational and economic structures, respondents' finance careers are advancing both more quickly and more narrowly over time.

[25] A difference of means t-test shows that the predicted patterns are statistically significant in the larger clusters 1 and 4. In cluster 1, graduation cohort 3 has a smaller mean intersequence distance than cohort 1 ($P \leq .001$) and than cohort 2 ($P \leq .001$). Similarly, in cluster 4, graduation cohort 3 has a smaller mean intersequence distance than cohort 1 ($P \leq .10$) and cohort 2 ($P \leq .10$). In table 5, as in the other tables, N indicates the number of respondents. But the means and statistical tests are based on the number of intersequence distances in each cell, which equals $(N - 1) + (N - 2) + (N - 3) \ldots + (N - N)$. The number of intersequence distances ranges from 28 (graduation cohort 3 of cluster 1 and graduation cohort 1 of cluster 5) to 1 (graduation cohorts 1 and 3 of cluster 2).

THE RIGHT-TRUNCATION PROBLEM

The analyst of real careers of living, working people unavoidably confronts the problem of right truncation. Here the third cohort is the most severely truncated. Moreover, these data, by design, include only high-ranking female finance executives. There could exist some late bloomers the same age as the youngest cohort who have not yet reached a sufficiently high level in finance to be included in the sample. There is no real solution to this problem other than caution about interpretations. Future research should examine whether 10 years from now female finance executives of third graduation-cohort age continue to have more narrowly focused careers than their predecessors or whether their ranks have been diluted by women who began their careers as teachers and social workers and more recently attained finance executive status.

Nonetheless, I made two checks to bolster the argument that female finance careers are becoming more homogeneous over time. First, I quickly looked for evidence regarding the existence of a late-bloomer population. My respondents who attended business school generally went to elite institutions. Older women studying for MBA degrees at elite business schools would constitute a possible source of future late bloomers. To try to see if these women existed in large numbers, I read Web pages, ordered brochures, and interviewed admissions offices at 11 top business schools.[26] The current mean age of the MBA student body at enrollment was similar across the schools and averaged 27 years. Other than MIT, the admissions offices gave me no data on mean age by sex. MIT reported that the mean age of female students was 26.5, a year younger than that of male students. I asked the staff of offices that did not provide data on age by sex whether they had an impression whether one sex was, on average, older or had a different age distribution than the other sex. The staff said either that they believed the age distribution for men and women to be similar or that they had "no impression" about this.

Staff members explained that the MBA admissions process favors applicants with business experience. For example, 98% of the incoming University of Chicago MBA class of 1997 had work experience, and the mean years of experience was 4.5. Assuming the average female student's mean age is around 27, she would have finished college and then worked, proba-

[26] I investigated the business schools reported by the March 1997 *U.S. News and World Report* as the top 10: Stanford, Harvard, University of Pennsylvania, MIT, University of Chicago, Northwestern, Columbia, Dartmouth, Duke, and University of California, Berkeley. I also looked at New York University, the one business school listed in the top five in finance that was not also on the previous list (Lord 1997). My research excluded executive MBA programs, which are shorter courses of study designed for middle- and upper-level executives.

TABLE 7

INTERSEQUENCE DISTANCES OF GRADUATION COHORTS, WITHIN CLUSTERS, FIRST 19 YEARS OF ALL CAREERS

CLUSTER	MEAN INTERSEQUENCE DISTANCE			
	Within Cluster	Among First Graduation-Cohort Careers	Among Second Graduation-Cohort Careers	Among Third Graduation-Cohort Careers
1	.46 (19)	.54 (7)	.58 (4)	.29 (8)
2	.44 (7)	.52 (2)	.49 (3)	.34 (2)
3	.53 (9)	.68 (3)	NA (1)*	.47 (5)
4	.66 (15)	.57 (8)	.67 (3)	.55 (4)

NOTE.—*N*s are given in parentheses.

* The mean intersequence distance could not be calculated because cluster 3 has only one second-cohort career.

bly in business, for a few years before starting her MBA program. This pattern does not resemble my data's first and second graduation-cohort members, almost two-thirds of whom initially pursued careers and sometimes advanced degrees in female-dominated occupations before entering finance. This cursory glance at elite MBA programs does not suggest that they are housing large numbers of late bloomers.

Another check was to equalize the truncation across the three cohorts by artificially shortening each career to include only the first 19 years after college graduation.[27] I then reanalyzed the data. The findings were very similar to those concerning the whole careers. For the shortened careers, the mean distances among the first and second graduation cohorts within each cluster were again greater than the overall cluster mean (with one exception), while the mean distance among the third-cohort careers within each cluster was less than that cluster's overall mean. These distances are reported in table 7 and summarized in table 8.[28] The first half of female

[27] I picked 19 years as a convenient cutoff point for artificial truncation because 19 is the median length of the third graduation cohort's whole careers and half the length of the longest careers in the sample.

[28] The only exception to the predicted pattern is cluster 4, graduation cohort 1, which has a smaller intersequence distance than that for cluster 4 as a whole (tables 7 and 8). This is because all but one of the cluster 4, first-cohort respondents had a similar pattern of beginning their work life in female-dominated occupations (fig. 1). Other than that exception, difference of means *t*-tests showed that differences between graduation cohorts 1 and 2 and between cohorts 1 and 3 are statistically significant in each of the three larger clusters: cluster 1 ($P \leq .001$), cluster 3 ($P \leq .01$), and cluster 4 ($P \leq .01$).

TABLE 8

SUMMARY OF TABLE 7: INTERSEQUENCE DISTANCES OF GRADUATION COHORTS, WITHIN CLUSTERS, FIRST 19 YEARS OF ALL CAREERS

	GRADUATION COHORT*		
CLUSTER	1	2	3
1	GT	GT	LT
2	GT	GT	LT
3	GT	NA	LT
4	LT	GT	LT

* GT indicates that the graduation cohort's intersequence mean distance is greater than the cluster's mean intersequence distance. LT means that the cohort's intersequence mean distance is less than the cluster's mean intersequence distance.

finance-executive careers shows evidence of increasing rigidity by the third graduation cohort.

I also reanalyzed the slopes of the artificially truncated careers. (Recall that in contrast to the rigidity analysis, the slope analysis examines *finance* cohorts.) The first 19 years of respondents' careers show the same pattern as the slope data for the whole careers. Slopes of the truncated careers increased abruptly between finance cohorts 1 and 2 and remained fairly constant thereafter (see table 9).

The first half of female finance-executive careers has indeed transformed over the past 30 years. These patterns could conceivably change depending on the possibility of late bloomers. But among currently successful executives, the careers of women who entered finance after 1973 look quite different from the careers of women who entered finance before 1970. Those starting careers after 1973 enjoy quicker promotions and a faster overall career pace than women beginning finance careers in the 1960s. In the third graduation cohort, women's managerial careers resem-

TABLE 9

MEDIAN AND RANGE OF CAREER SLOPES IN EACH FINANCE COHORT, FIRST 19 YEARS OF ALL CAREERS

	1 (1960–69)	2 (1970–73)	3 (1974–80)
Median	.70	1.0	.93
Mean	.66	.94	.94
Range	.00–1.20	.00–1.45	.00–2.50
N in each finance cohort	10	11	35

NOTE.—Years in which cohorts entered finance labor market are given in parentheses.

ble the stereotypical successful male managerial career (Mills 1951; Powell 1993). They progress quickly from business-related college majors to business school or entry-level management jobs up to significant executive responsibility. Older respondents had the option of working in other fields before pursuing successful finance careers and faced higher barriers to entering finance. In contrast, women leaving college after 1973 seem to be on a more rigid, unyielding track that demands specialization in finance-related fields during or immediately after college.

CONCLUSION

This article examines one end of the distribution of employed women: senior executives in finance-related fields. This is a useful case for several reasons. It outlines unusually successful career pathways over social structural barriers to advancement. These women with ample resources highlight the effects of social and legal change at their strongest. They were well able to exploit legal changes that were designed to help all employed women.

The article demonstrates the importance of studying intact careers in historical context with methods sensitive to both objective structures and subjective interpretations. Despite female finance executives' rarity and isolation, their careers fall into one of four career types: the corporate climbers, big fish in small- and medium-sized organizations, movers and shakers, and entrepreneurs. These four trajectories are shaped by a constellation of causes: ILMs, geographic mobility, the presence or absence of work histories before finance, and turbulence. A historical event cut across all these factors and shaped their impact on women's careers. The EEOC enforcement of women's employment rights in the early 1970s increased respondents' rates of advancement and altered their expectations about the barriers they would encounter.

The sharp discontinuity in the career pace and patterning of cohorts closely following one another reminds us that change across cohorts is not always gradual. Although social practices usually reproduce social structures with small revisions, historical events can abruptly interrupt social regularities and rearrange structures (Sewell 1996). First and second cohorts participated in this historical event by pushing against structural barriers with lawsuits and threats to quit and by aggressively taking advantage of new opportunities. The altered, less-discriminatory structures in turn shaped the third cohort's perspective. Ironically, many younger third-cohort members were unaware that their mobility was in part due to the creative action of their female predecessors. Swimming with the current, these younger respondents took personal credit for their own rapid progress (see Emirbayer and Mische 1998).

There is some evidence to suggest a paradox: as women experience more freedom in pursuing and succeeding in finance careers, their career pathways have become more rigid. It is extremely rare for currently senior women to have worked part time or to have spent time outside the labor force. Although some mothers of young children say they wish they could work part time or take a leave of absence, they believe their career advancement would never recover if they demonstrated less than total commitment to their careers. Moreover, the youngest women may be on a track that demands specialization in business school or finance-related work immediately after college. Executive women's careers may be growing more coercive as they more closely resemble the template of executive men's careers.

The liberal strand of the feminist movement, with its emphasis on equal opportunity for individuals, has opened up elite finance occupations to some women. Yet the very success of liberal feminism has weakened the movement. Many younger beneficiaries give their own effort full credit for their advancement and deem the women's movement irrelevant.

Even among female finance executives, liberal goals are not fully accomplished. Executive women enjoy prestigious, highly paid work, but they compare themselves not to the average worker but to their predominately male colleagues. As old barriers crumble, many respondents encountered new barriers that they interpret as new forms of sexual discrimination.

Feminists whose concerns extend beyond liberal goals toward a more radical transformation of society will note that the organization of finance work has been virtually unaffected by feminism. Female finance managers have neatly conformed to the organizational demands and rigid timetables of elite careers. Executive women in finance-related fields have transformed themselves rather than the organizations to which they devote most of their waking hours.

APPENDIX

A Simplified Example of Optimal Matching Techniques

Optimal matching techniques help us find typical patterns in sequences of career events. They provide a measure of resemblance between career pairs. These resemblances (or their inverse, distances) can then be scaled or clustered to show patterns and to reveal any common trajectories (see Sankoff and Kruskal 1983; Abbott and Hrycak 1990; Abbott 1995).

Figure A1 examines three hypothetical career paths of job levels only (see table 1 for job codes). This example ignores organization sizes. The sequences begin at college graduation. Each code represents one year in time.

```
A.   ps ps 4  4  5  5  5  5  6  6  6  6  6  7  7  7
B.   ps ps 4  4  5  5  5  5  5  5  5  5  5  6  6  en
C.   fe fe fe fe fe 4  4  4  4  4  5  5  5  5  5  5  5  5  6
```

FIG. A1

By inspection, we see that career A looks more similar to B than it does to C. A and B each begin with professional school followed by two years at job level 4, and so on. C is longer and begins with 5 years in a female-dominated occupation. C then spends six years at level 4, and so on.

The standard general algorithm for alignment is the Needleman-Wunsch algorithm. It measures the distance between A and B by determining how difficult it is to turn A into B, or vice versa. It does so by calculating "substitution" costs, the cost of turning a mismatched event of B into A's event. The algorithm also uses "insertion" (or "deletion") costs. These measure the cost of inserting blank years into one sequence (or deleting years from the other sequence).

In figure A2, let "¦" indicate a perfect, costless match. Let "I" stand for insertion costs and "S" for substitution costs.

```
                                I  I  S  S  S        S  I  I
A.   ps ps 4  4  5  5  5  5        6  6  6  6  6  7  7  7
     ¦  ¦  ¦  ¦  ¦  ¦  ¦  ¦                    ¦  ¦
B.   ps ps 4  4  5  5  5  5  5  5  5  5  5  6  6  en
```

FIG. A2

The first eight elements of A and B are costless matches. The next eight events are mismatched and require either substitions or insertions. To transform A into B, the metric moved part of A's string over to the right to make the two "6s" in B matchup with A.

This alignment uses four substitutions and four insertions. The analyst can vary the actual cost of each substitution depending upon the elements being replaced, but we will ignore that here. (Table A1 lists the varied substition costs used in this study.) The analyst also decides the ratio of substitution to insertion costs based on theoretical and practical criteria. For example, if an insertion cost is set to one-half a substitution cost, then the alignment would cost 4 sub + (4 ins × .5) = 6. In other words, the distance between A and B is 6 units.

Now we measure the distance between careers A and C. The alignment of A and C in figure A3 takes six substitutions and 10 insertions. The cost then is 6 subs + (10 ins × .5) = 11.

```
     S  S  I  I  I  I  I  I  I                    S  S  S  S     I  I  I
A.   ps ps                   4  4  5  5  5  5  6  6  6  6  6  7  7  7
                             ¦  ¦  ¦  ¦  ¦  ¦                 ¦
C.   fe fe fe fe fe 4  4  4  4  4  4  5  5  5  5  5  5  5  5  6
```

FIG. A3

TABLE A1

SUBSTITUTION COST MATRIX FOR OPTIMAL MATCHING ANALYSIS*

	nf	fe	ps	4S	4M	4L	4V	5S	5M	5L	5V	6S	6M	6L	6V	7S	7M	7L	7V	8S	8M	8L	8V	en
nf	. . .																							
fe	.71																							
ps	.84	.85																						
4S	.87	.87	.78																					
4M	.86	.86	.74	.71																				
4L	.85	.87	.74	.78	.76																			
4V	.85	.86	.68	.78	.73	.77																		
5S	1.00	1.00	.90	.78	.78	.78	.77																	
5M	.99	1.00	.90	.78	.72	.78	.77	.74																
5L	1.00	1.00	.90	.78	.78	.74	.78	.78	.78															
5V	.99	1.00	.90	.78	.77	.76	.71	.75	.76	.77														
6S	1.00	1.00	.90	.90	.90	.78	.78	.75	.78	.78	.78													
6M	1.00	1.00	.90	.90	.89	.77	.78	.78	.72	.78	.76	.73												
6L	1.00	1.00	.90	.90	.90	.89	.90	.78	.77	.72	.77	.78	.78											
6V	1.00	1.00	.90	.90	.90	.90	.90	.78	.77	.78	.72	.78	.77	.77										
7S	1.00	1.00	.90	.90	.90	.90	.90	.90	.90	.78	.77	.78	.78	.78	.77									
7M	1.00	1.00	.90	.90	.90	.90	.90	.90	.88	.78	.78	.74	.73	.76	.77	.77								
7L	1.00	1.00	.90	.90	.90	.90	.90	.90	.90	.90	.90	.78	.78	.75	.78	.76	.74							
7V	.98	1.00	.90	.90	.90	.90	.90	.90	.90	.90	.90	.78	.77	.78	.76	.78	.78	.78						
8S	1.00	1.00	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.78	.78	.75	.78	.78	.78					
8M	1.00	1.00	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.78	.77	.78	.77	.78	.70	.78				
8L	1.00	1.00	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.78	.78	.76	.78	.78	.78			
8V	1.00	1.00	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.78	.78	.78	.76	.78	.78	.78		
en	1.00	1.00	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.89	.90	.89	.73	.77	.78	.78	.78	.70	.78	.78	. . .

* This matrix lists the cost for substituting a row for a column element in the alignment of two sequences. These substitution costs, plus the .48 cost of each insertion or deletion of an element in one sequence are added to determine the distance between two sequences. The diagonal substitution costs, which indicate the substitution of one element with an identical element, are zero. Job-level and organization-size codes are presented in table 1.

A and B are only six units apart, while A and C are eleven units apart. The distances between sequences can be scaled or clustered. See figure 1 for a cluster analysis of career sequences from my data.

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