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## Introduction

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**I**N THE United States, two-fifths of all employed Americans work mostly at nonstandard times—in the evening, at night, on a rotating shift, or during the weekend. Although much attention has been given to the *number* of hours Americans work (Schor 1991; Robinson and Godbey 1997), the issue of *which* hours—or days—Americans work has generally gone unnoticed by researchers and policymakers alike. Yet the pervasiveness of nonstandard work schedules is a significant social phenomenon, with important implications for the health and well-being of individuals and their families and for the implementation of social policies.

How did these high levels of nonstandard work schedules come about? The practice of working evenings and nights has been around at least as long as midwives have been employed for childbirth, an event that can occur at any hour. Policies encouraging late-hour employment go back at least to Roman times, when city deliveries of goods by horse-drawn vehicles were restricted to the night hours to reduce daytime traffic congestion (Scherrer 1981). Regulations against night work during the Middle Ages may have stalled an emerging trend, as Jeffrey Scherrer has argued, but by the nineteenth century the growth of large cities, the increasing complexity of the division of labor that accompanied the industrial revolution, and the introduction of artificial lighting were providing strong motivation to expand economic activity around the clock. Reflecting on the early part of the twentieth century, Amos Hawley (1950) wrote that periodicity was giving way to continuity, and the diurnal cycle, while still predominant, was becoming a twenty-four-hour cycle. A few decades later, Murray Melbin (1978, 3) offered the intriguing notion of night as frontier, seeing the “expansion into the dark hours [as] a continuation of the geographic migration across the face of the earth.” Both scholars viewed the growth of shift work in the United States—that is, work schedules that deviated from regular daytime hours—as a demonstration of this trend. Today the new phrase “24/7” has taken hold in our everyday language to denote around-the-clock availability,

and the demand for such availability is increasingly evidenced in labor market activity as well as in our interpersonal relations.

This book does not focus on the precise trend in nonstandard work schedules among employed Americans over the decades because it cannot be rigorously assessed, owing to lack of comparable data.<sup>1</sup> It focuses, rather, on the challenges to various aspects of family functioning posed by today's high levels of nonstandard work schedules. In looking at these challenges, we will see that the prevalence of nonstandard work schedules has produced a new "home-time" family structure for many Americans, particularly the working poor: spouses often are not at home together in the evening or at night, and parents are often not home at such times with their children. What does this new temporal structure mean for the nature and stability of family life, including the care of children? Do scholars and policymakers need to reconceptualize the family to take into account the temporal diversity at home generated by temporal diversity at work? A key objective of this book is to address these questions with empirical data and to document in some detail the characteristics of persons in different family situations who work nonstandard work schedules and the factors that may encourage this decision.

We will see that the consequences of working nonstandard schedules often differ for men and for women, and for families with and without children. While there are some positive consequences relating to more gender equality in housework and increased parental time with children, and some individuals may find other advantages to such schedules, there are negative social consequences such as higher marital instability and complex child care patterns that give cause for concern.

It should be noted at the outset that in this book nonstandard work schedules are defined as those in which the *most hours* employed are within a fixed daytime/weekday period. We will focus on the prevalence and impact of nonstandard work *shifts* in the evening or at night, on a fixed or rotating basis, or otherwise variable schedules, and of weekend employment. This is a perspective distinct from a focus on the total number of hours worked or on flextime; these aspects of employment timing have received far more attention. These three aspects, of course, are not mutually exclusive: people working either day or nonday shifts may work short or long hours or may vary the specific hours they work within a narrow range of starting and ending times. Moreover, people who work day shifts may start their jobs in the very early hours of the morning or end their work in the early evening but still be designated as daytime workers, given the focus here on the shift on which American workers spend *most* of their hours. This focus is important because it best differentiates the temporally "deviant" workers from others. (A

focus on *some* but not necessarily *most* of the hours worked clearly would lead to much higher prevalence rates for nonstandard work shifts than shown here.)

Correspondingly, American society as a whole is moving toward a 24/7 economy at the same time as there is a growing diversity in the number of hours people work (Smith 1986; U.S. Department of Labor 2002a), more flextime (U.S. Department of Labor 1998), and a trend toward employment during the “fringe times” of the traditional nine-to-five workday (Hamermesh 1999a). Also, there have been significant changes in the nature of employer-employee relations; these bonds have weakened with the rise of temporary and contract work, even though such workers represent a small proportion of the labor force (Clinton 1997; Kalleberg 2000). Interestingly, these trends have occurred even as there has been little change in the average number of hours worked each week—an increase of just 1.1 hours between 1976 and 2001 (Rones, Ilg, and Gardner 1997; U.S. Department of Labor 2002a).<sup>2</sup>

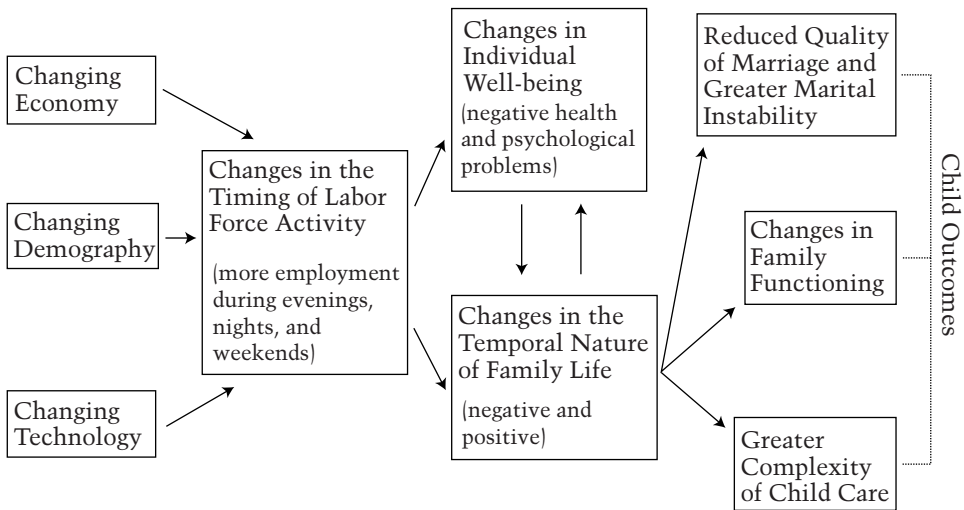
It is important in setting the stage for the current study that we understand factors at the societal level that may be driving the demand for employment at nonstandard times. In particular, it is relevant to consider the impact of changing societal conditions at the macro level on the timing of labor force activity, and by extension, on individual and family well-being.

## The Growing Demand for Employment at Nonstandard Times

As portrayed in figure 1.1, at the macro level there are at least three interrelated factors that increase the demand for Americans to work late or rotating shifts and weekends: the changing economy, changing demography, and changing technology.

An important aspect of the changing economy is the growth of the service sector, with its high prevalence of nonstandard schedules relative to the goods-producing sector. In the 1960s the number of employees in manufacturing greatly exceeded the number in service industries, whereas by 2000 the percentage was over twice as high in services as in manufacturing (Meisenheimer 1998; Department of Labor 2002b).<sup>3</sup> During the same period women’s labor force participation almost doubled, from about one-third to two-thirds of all women (U.S. Department of Commerce 1975, 2002). The interaction between the growth of women’s employment and the growth of the service sector is highly relevant. It is generally acknowledged that women increasingly entered the

FIGURE 1.1 *The Movement Toward a 24/7 Economy and Its Consequences*



Source: Author's configuration.

labor force because of the growing demand for employees in the service occupations that are disproportionately female, such as clerical and sales (Oppenheimer 1970; Goldin 1990). But the influence goes in the other direction as well: women's increasing labor force participation contributed to the growth of the service economy. For example, the decline in full-time homemaking has generated an increase in the extent to which family members eat out and purchase other homemaking services. Moreover, women's increasing daytime labor force participation has generated a demand for services during nondaytime hours and weekends, since women are increasingly less able to shop during the day or to be home for daytime service workers—at least not on weekdays.

Demographic changes have also contributed to a growing demand for late-shift and weekend employment. One relevant change is the postponement of marriage by almost three years since 1960 for both women and men; by 1998 the median ages at first marriage were 25.0 and 27.7, respectively (U.S. Department of Commerce 1960, 1998).<sup>4</sup> This change, along with the rise in real family income resulting from the growth of two-earner couples, has increased the demand for recreation and entertainment during evenings, nights, and weekends.<sup>5</sup> Further, the aging of the population—from 9.2 percent age sixty-five and over in

1960 to 12.4 percent in 2000 (U.S. Department of Commerce 1975, table 3; 2002, table 11)—has increased the demand for medical services over a twenty-four-hour day, seven days a week.

Finally, technological change, along with reduced costs, has moved us to a global twenty-four-hour economy. Frances Cairncross (1997) has written about the “death of distance” due to such changes. But global low-cost technological change is also encouraging what might be termed the “death of diurnal time.” The ability to be “on call” at all hours of the day and night to others around the world at low cost generates a need to be so available. For example, the rise of multinational corporations and the use of computers, faxes, and other forms of instant communication increase the demand for branch offices in different locations to operate at the same time corporate headquarters is open. Similarly, international financial markets are expanding their hours of operation, and overnight mailing companies require round-the-clock workers, all days of the week.<sup>6</sup>

With a watchful eye, one can see many anecdotal reflections of these trends in the mass media. For example, it was reported in the *New York Times* on November 1, 1998, that United Parcel Service (UPS) found it difficult to fill its midnight-to-3:00 A.M. shift in Louisville, Kentucky, its busiest package-processing hub. As an incentive, it offered free tuition at three of the local colleges, with the city and UPS splitting the cost. Moreover, UPS and the city built a dormitory with rooms to rent to these late-night employees, “with special soundproofing, heavy blinds and more classrooms, and offering shuttle bus service between the job, the dormitory and classes.”

There are also many indications in the media that financial markets are expanding their services around the clock. On June 16, 1999, the *New York Times* carried Nasdaq’s announcement that it would extend its trading hours in the United States. U.S. institutions specializing in foreign exchange and interest rate derivatives with trading hubs in different parts of the world, such as Fleet Global Markets, whose website boasts of its “real time, 24-hour transaction services and counseling for our customers, as well as 24-hour monitoring.”

Although the global markets are contributing to the demand for nonstandard work schedules, most of the demand for employment during late hours in the United States, as we will see, is for jobs in low-paying occupations in local markets, such as around-the-clock nursing attendance, food services, and recreation and entertainment.<sup>7</sup> Technology may change the way some local services are being dispensed, as exemplified by the 24/7 availability of local librarians via the Internet to assist Maryland residents, as reported in the *Washington Post* on March 17, 2003. In assessing the impact of demand for around-the-clock ser-

vices, it is important to distinguish among consumers, employers, and employees. Whereas, generally, consumers may benefit from the 24/7 availability of services, and employers may benefit from 24/7 capital utilization, many employees may find late-hour employment far from desirable.

The focus of this book is on employees. The data presented here will show that most people who work nonstandard hours report that they do so primarily because it is a job requirement rather than for personal reasons. Pay differentials for working late hours are not common; the amounts when provided tend to be small, and such differentials are rarely reported as a primary motivating factor. The fact that a disproportionate number of those working nonstandard work schedules have low incomes adds an important economic stressor to the physical, psychological, and social stressors affecting their lives.

Although this book analyzes microlevel data, a critical outcome at the macro level is work-time inequality among employed Americans. This issue is closely tied to income inequality. Indeed, as Daniel Hamermesh has shown (1999b), when taking into account nonpecuniary aspects of employment, such as late hours and accident rates, one finds that labor force inequalities based solely on income are understated.<sup>8</sup>

## Responding to Demand

Figure 1.1 is a dynamic model that views employees responding to growing demand by increasingly working late hours and weekends, work schedules that in turn alter individual well-being and the temporal nature of family life and consequently child outcomes. In this book, given the data limitations, we necessarily take a more static view, with two major objectives.

The first objective is to provide a better understanding of the distinctive characteristics of those who respond to the demand for employment at nonstandard times, why they work such schedules, and the family context in which this occurs (chapters 2 and 3). The second objective is to assess some of the consequences of nonstandard work schedules for the family—namely, the quality and stability of marriages, various aspects of family functioning, how children are cared for when parents are at the workplace, and the misfit between work hours and child care for many low-educated mothers (chapters 4 through 8). (Although figure 1.1 points to the very important issue of the potential consequences of diverse family work schedules for child well-being, this cannot be assessed with the data sources used here.)

To address the first objective, the analyses rely on the May 1997 CPS, a nationally representative sample of over fifty thousand house-

holds described in some detail in chapter 2. The large numbers of employed persons in the CPS provide a rare opportunity to examine detailed occupations in relation to work schedules. Also, the CPS is the only national data source on employees' reasons for working late or rotating hours. We will see that employment during nonstandard hours and days is most evident for those who are young, single, less-educated, and black. However, with one-fifth of all employed Americans working something other than a fixed daytime schedule and one-third working weekends, employment during nonstandard hours and days is pervasive among all subgroups. Moreover, the ratios are higher when married couples rather than individuals are the unit of analysis because either spouse can work such nonstandard schedules. As we shall see, one-fourth of two-earner married couples include at least one spouse (rarely both) who works a schedule other than a fixed daytime shift. This ratio increases to one-third when couples have children. The younger the age of spouses, the lower their education, and the larger the number of children, the higher the ratio. Moreover, the ratio is higher among blacks than whites. Using education as a proxy for income, it is clear that "split-shift" couples are most prevalent among the working poor.

How unique is the United States? Although there is a problem of comparability between countries as well as within the United States over time, I offer a rough comparison of the CPS data with Labour Force Survey (LFS) data for a number of European countries to demonstrate that the United States is not alone in the widespread prevalence of nonstandard schedules (chapter 2).

## Family Consequences

To address the second objective of this book—better understanding of the consequences of nonstandard work schedules for American families—I draw on the National Survey of Families and Households (NSFH). The first wave of the NSFH was conducted in 1987 to 1988 and the second in 1992 to 1994. The nationally representative sample in this survey comprises about thirteen thousand main respondents in the first wave and approximately ten thousand in the second wave and is further described in chapter 4.

Each of the chapters on the family consequences of nonstandard work schedules (chapters 4 through 7) reviews the literature dealing with the subject of that chapter, from marital quality and stability to family functioning and child care. There is little research to draw on that directly links these topics to work shifts or weekend employment, since there are few studies designed with this main purpose. An important exception is the classic study conducted in the early 1960s by Paul

Mott and his colleagues (1965), which intensively investigated the social, psychological, and physical effects of shift work on a sample of white, male, blue-collar workers in continuous-process industries in the east-central part of the United States. Even though it discussed family life from a traditional perspective (ignoring the employment status of the wife entirely), this 1965 study represented a significant step forward in our knowledge of the social aspects of shift work—at least for one important subgroup of American society—and no comparable in-depth study of shift work in the United States has since been conducted. Of special significance in this study is the detail it paid to the type of shift, with evening, night, and rotating shifts often showing differing outcomes. As we will see, the type of shift worked remains an important contingency in assessing family outcomes—even though, at times, we cannot assess this for particular subgroups because the sample size is too small.

Overall, we will see that the timing of labor force activity affects the temporal nature of family life in both positive and negative ways, and that negative consequences appear to be more likely, at least among the consequences considered. Moreover, short-term advantages may be offset by long-term disadvantages. For example, whatever financial and psychological benefits result from the greater participation of employed fathers in child care during the hours mothers are employed (and the fathers are not) may be offset by the greater risk of marital dissolution when parents work at night. Nonstandard work schedules are also associated with a lower quality of intact marriages. As for specific aspects of family functioning, we will see that among dual-earner couples, when either spouse works a nonday shift, husbands participate more in traditionally female household tasks. The findings with regard to parent-child interaction are mixed, depending on the type of interaction, type of shift, and gender of parent. We will also see that child care arrangements are more complex when parents work nonstandard schedules. Relying on CPS data, we will also look at what this complexity implies for the ability of low-educated mothers, who are especially likely to work late hours and weekends, to hold on to their jobs and not move on and off of welfare.

## Moving Forward

The overarching theme of this book is that nonstandard work schedules not only are highly prevalent among American families but also generate a level of complexity in family functioning that needs greater attention. Because the findings are based on secondary analyses of two national data sets not specifically designed to study work schedules in



depth, they are therefore far from definitive. Nevertheless, a significant social phenomenon is unfolding that merits our attention, and the fact that our data sources on this issue are so limited should be of concern. Chapter 9, in addition to summing up, addresses some serious gaps in our knowledge while calling for an expanded research agenda and offers some policy alternatives while calling for more public discourse.

### A Note About Health

An important gap in our knowledge that should be kept in mind throughout this book is the fact that we cannot assess the role of health factors linked to shift work that undoubtedly have ramifications for family functioning. Moreover, the desire of many shift workers to be in sync temporally with their family when not on the job has health implications. There are no national data sources that would permit us to address this interrelationship,<sup>9</sup> but a large body of research attests to the negative health consequences for individuals who work nights and rotating shifts. The greater health risk associated with very late or changing work hours stems from changes to an individual's circadian rhythms, which are linked to such biological functions as body temperature, hormone levels, and sleep. Behaviorally, there is evidence of greater gastrointestinal disorders, higher rates of cardiovascular disease, breast cancer, miscarriage, preterm birth, and low birthweight (U.S. Congress 1991; Boggild and Knutsson 1999; Wedderburn 2000; Schernhammer et al. 2001). The increased risk can be substantial. For example, a review of studies on cardiovascular disease suggests a 40 percent greater risk among shift workers (Boggild and Knutsson 1999). Chronic sleep deprivation and the resulting fatigue and stress are viewed as a major problem for job productivity (Tepas and Price 2001).

The negative social outcomes of late or rotating schedules may well be a consequence of the interaction among social, psychological, and physiological stressors. Research indicates that memory, reaction time, manual dexterity, and subjective feelings of alertness vary over the course of the day and are altered by changes in circadian rhythms and chronic sleep deprivation. How these factors affect job performance depends on the type of job (how much vigilance, physical activity, and cognition are required), the specific work hours, motivational factors, and the adaptability of the individual. It is not coincidental that the major performance disasters at Chernobyl and Seven Mile Island and aboard the Exxon *Valdez* were all late-night events; each of these disasters was linked to the fatigue of workers (U.S. Congress 1991).

The chapters that follow demonstrate the need to acknowledge the challenges that American families face as we move toward a 24/7 econ-

omy. These challenges become evident from the descriptive data that demonstrate the pervasiveness of late work shifts and weekend employment for family members as well as single individuals, and for parents as well as nonparents—raising questions as to why Americans, particularly those with children, have responded to the demand for employment at nonstandard times in such large numbers. The statistical analyses presented allow us to assess some of the consequences of this work schedule decision on family functioning, after adjusting for the possible effects of other social and economic factors on family life. Challenges to the family emerge here as well, and one wonders whether Americans are aware of the tradeoffs they are making in working such schedules. Clearly, the more we learn from research, the more informed the public will be. Let us begin with a detailed look at who works nonstandard schedules and why.