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National Institute for
Occupational Safety & Health
Robert A. Taft Labs
DHHS PHS CDC

Order No. 81-3267
Alternative Worker Schedules

Submitted by
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October 12, 1981

Lieb, Lefkowitz and Associates, a small business with offices in Washington, D.C., Columbus, South Carolina, and Albany, New York, sets out in this report information on use of alternative work schedules in the United States. The report first provides definitions of work schedules differing from the standard 5-day, 40-hour diurnal workweek, including variations of flexitime and compressed workweeks, temporary and permanent reductions in work hours, and flexible work life options. It then identifies, where data are available, the industrial settings and the occupations within industries where alternative work schedules are used and the number of workers engaged in each type of alternative schedule.

To prepare this report, we analyzed 1977-to-present data on hours of work and wages compiled by the Bureau of Labor Statistics (BLS). We also examined literature on alternative work schedules and reviewed formal surveys of current (and projected) usage.

Additionally, we obtained raw statistical data from a number of sources. Various employer associations shared findings from informal member surveys they had conducted, and several labor organizations analyzed contracts in their trades to determine hours of work and alternative work schedule usage and provided us with the results. Additional sources of raw data that might be used in further analysis are noted periodically.

In compiling the statistical tables that appear throughout the report, we looked principally at studies that used reasonably large samples. However, a few tables based on small samples are also included when necessary to shed light on particularly relevant issues.

Finally, resources for further information are included in the selected bibliography.

BACKGROUND

Technological developments and American values and expectations have changed at an accelerating rate during the post-World War II era. Among the changes are: a dramatic increase in the number of women in the work force and a corresponding increase in the number of dual-earner families; a growing disparity between levels of workers' education and the demands of the labor market (e.g., the proportion of workers with college degrees is expected to continue to rise rapidly while the proportion of professional and technical positions is projected to rise only slightly); a gradually aging work force; a declining supply of younger workers; and new technology, which has affected work design, in turn significantly influencing worker motivation and performance.

Corporate management increasingly has sought to develop adaptable, flexible organizational structures that can respond quickly to this changing environment. In the coming decade, human resource development will be an important part of corporate planning and must be in tune with the needs of the organization's top management goals. The successful organizations likely will be those that recognize the multiple goals and needs of workers and organizations and build flexibility into their management practices. One of the many strategies being considered is adoption of new work scheduling arrangements that can meet changing organizational and employee needs.

TYPES OF ALTERNATIVE WORK SCHEDULES

Flexitime

Flexitime is a work schedule that leaves the standard number of working hours unchanged but allows employees some choice of when to start and stop working. Flexitime arrangements are known by many names--flexible work hours, variable work hours, gliding time, flexible day, flexitour, floating day, best time, and maxiflex, to name a few. Although plans vary in the degree of flexibility allowed employees, they share a common element--each gives employees some choice about when they start and end their work days.

There is no one established flexitime arrangement. Instead, each program is tailored to the needs of the implementing organization, its employees, and the community. Two basic approaches are used: core work hours and no core hours. In the former approach, all employees must work during established core hours, but have choices during flexible bands. Sometimes a single core of work hours is established at the middle of the day; in the morning and afternoon are flexible bands of time when employees have some choice. For example, in a single core plan based on an 8-hour work day plus 30 minutes for lunch, the entire work force might be required to be present between 9:30 am and 3:00 pm but an employee might, for example, arrive at work as early as 6:30 am and leave at 3:00 pm. In a double core arrangement, morning and afternoon core working hours are established and flexible bands appear at both ends of the work day and around lunch time. For example, the entire work force might be required to be present between 1:00 pm and 3:00 pm, but

an employee could choose when to arrive at work, when to have lunch, and when to leave work. In a no-core-time approach, employees are not required to be present at any particular time, so long as they work the required number of hours.

Flexitime arrangements vary a great deal in the amount of choice individual employees are allowed, both from day to day and over a longer period. For example, the employee may change schedules from day to day--or the schedule, once chosen, may be fixed. Flexibility may be limited to starting and stopping times within a standard work day--or may be extended to the work week, the accounting period, or a work month.

Compressed Workweek

Compressed workweek is an arrangement whereby employees work the contracted number of hours (e.g., weekly, biweekly), but over fewer days. Initially, the term referred to a 4-40 plan--that is, the standard 40-hour workweek was compressed into four 10-hour work days. But there are other variations. One provides for a 4½-day week, with employees putting in 9 hours for 4 days and 4 hours on the fifth day; this approach is more common during warm-weather months and is often called "summer hours." Another variation is a 5/4-9 plan whereby employees work nine longer days over a two-week period to provide one day off every other week. The rolling 10/4 is a variation wherein workers are on the job four 10-hour days and then off four days.^{1/}

Compressed workweek programs are also applied when the workweek is shorter than the standard 40 hours. One variation is the three 12-hour day workweek. Adoption of a compressed workweek may lead some companies to reduce their standard workweek. For

instance, a number of companies considering implementation of a 4-40 plan but concerned that a 10-hour day would cause fatigue or family problems for some employees have first reduced their normal workweeks.

Twelve-hour shifts, extensions of the standard 8-hour shift that enable shift workers to work fewer afternoons, evenings, and weekends, are considered separately in this report because this arrangement represents a small percentage of users and generally is limited to highly capital intensive, continuous operations. Among the variations are 3-day-on, 3-day-off rotating schedules; an every other Friday, Saturday, and Sunday off arrangement; and 4-day-on, 4-day-off schedules. Data on use of 12-hour shifts in the petroleum and chemical refining industry are included; they may or may not apply to other industries.

Temporary Reduction in Work Hours

These are short-term strategies adopted for a limited time during an economic downturn, with concomitant pay reductions.

Included are:

- o Shortened workweek--all employees in the affected work groups work fewer hours per week and receive less pay.
(This report does not analyze implementation of temporarily shortened workweeks because the approach has been used since the Depression, while our study focuses on less traditional arrangements.)
- o Rotation layoff--all affected employees rotate weeks of work with weeks of nonwork, sometimes collecting unemployment insurance benefits for weeks of nonwork.

- o Short-time compensation, or shared work unemployment compensation--an experimental program operating in California and recently made permissible in Arizona by passage of legislation which enables workers to be partially compensated through the state unemployment insurance system for temporarily shortened workweeks.

Permanent Reduction in Work Hours

These are arrangements institutionalized in personnel policies and collective bargaining agreements and typically initiated in response to employee desire for shorter work hours and/or longer periods of leisure. Among these reductions are:

- o Shorter standard workweeks--permanent reductions in weekly work hours without reduction in pay.
- o Extended holidays and vacations--substantial increases in employees' leave time, established through changes in personnel policies and collective bargaining arrangements.
- o Part-time--voluntary reductions in total work hours, accompanied by reductions in salaries and, often, by prorated fringe benefits. Among the various part-time arrangements are permanent part-time, job sharing, rehiring of retirees, and summer-off arrangements. For this report, the definitions of permanent part-time and job sharing are expanded, as their use is increasingly common.

Permanent part-time arrangements are those whereby employees voluntarily work substantially fewer hours or days than do full-time workers. A key difference between traditional part-time and career-oriented part-time is that the latter jobs originally were considered permanent, full-time positions. Permanent part-time

work usually means opportunities for career advancement and eligibility for the same fringe benefits as full-time career employees, but generally with benefits prorated according to the number of hours worked. Job sharing, a form of permanent part-time, is a voluntary arrangement whereby two or more employees, each working less than full time, divide the responsibilities and duties of one full-time position. Other names for this arrangement are splitting, pairing, twinning, tandem, and split tour.

Flexible Work Life Options

These are arrangements developed by employers to provide periodic breaks in work lives of full-time employees who meet certain requirements. They include:

- o Voluntary time-income trade-off arrangements--contractual arrangements whereby full-time employees may, for specific time periods, voluntarily reduce their wages or salaries in exchange for additional time off work.
- o Leaves--includes sabbaticals (paid blocks of time away from work to pursue leisure or personal interests) and social service leave (paid time away from the work place to assist nonprofit agencies).
- o Phased (or gradual, flexible, transition) retirement--a gradual reduction of work hours for older employees prior to full retirement.

USE OF ALTERNATIVE WORK ARRANGEMENTS: AN OVERVIEW

Alternative work schedule approaches have been adopted to meet varied employer and employee needs. Reasons for adopting such schedules include: to improve efficiency and organizational

performance; as an alternative to layoffs; to comply with collective bargaining agreements; to prepare for changes in the work force (e.g., the entry of women and an aging work force); to adjust to skill shortages; to achieve or maintain production flexibility; to save money; to prevent employee burnout; to retain valuable and skilled workers; to make recruitment easier; and to achieve a more flexible personnel policy.

Just as the reasons for starting programs are diverse, so too are the types of industries and kinds of workers involved in programs. Most alternative work schedule arrangements have been tried in most industries. In this report, we give the number of workers on many of the schedules and attempt to identify some patterns of usage.

Three schedules that have received the most attention in surveys during the past few years are flexitime, compressed work-week, and permanent part-time. Table 1 shows the number and percentage of employees using these three schedules; Table 2 indicates the percentage of American firms that have adopted the alternative work schedule arrangements, based on studies by Nollen and Martin, Copperman, and the Conference Board. Later sections of this report describe the other work scheduling arrangements defined above.

IMPLEMENTATION OF FLEXITIME

Industry Use

The May 1980 supplement to the Current Population Survey, conducted by the Bureau of the Census for the Bureau of Labor

TABLE 1

NUMBER AND PERCENTAGE OF U.S. EMPLOYEES USING ALTERNATIVE WORK SCHEDULES: FLEXTIME, COMPRESSED WORKWEEKS, AND PERMANENT PART-TIME

Data Source	Flexitime		Compressed Workweeks		Permanent Part-time	
	Number (millions)	Percent	Number (millions)	Percent	Number (millions)	Percent
Nollen and Martin ¹						
1977	2.5-3.5	5.8				
Dept. of Labor ²						
1977			1.399	2.3		
1978			1.400	2.2		
1979			1.493	2.2		13.8
1980	7.638	11.9	1.854	2.7		

¹Nollen and Martin exclude self-employed workers; professionals, managers, and salespeople who have traditionally set their own hours; and those industries, government, and small-size firms (less than 50 employees) not represented in their survey sample in making their projections about the number and percentage of U.S. workers using flexitime in 1977. They also assume that only 45% of an organization's work force uses flexitime on the average when it is offered.

²Department of Labor figures for compressed workweeks represent full-time, nonfarm wage and salary workers on schedules of 4½ days or less, May 1977 to May 1980. Figures for employees on flexible schedules represent full-time, nonfarm wage and salary workers, May 1980.

TABLE 2

PERCENTAGE OF U.S. FIRMS USING ALTERNATIVE WORK
SCHEDULES: FLEXTIME, COMPRESSED WORK-
WEEKS, & PERMANENT PART-TIME

Data Source	Flexitime	Compressed Workweek	Permanent Part-time
Nollen & Martin, 1977 (national projected rate based on n=465)	12.8		
Copperman, 1979 ^{1/} (mail n=1304)	16.8		22.0
(phone n=258)	5.0		12.0
Conference Board, 1979 (pub. 1981)			
(n=354, blue)	3.0	6.0	
(n=541, white)	15.0	8.0	

^{1/} Copperman does not offer any explanation to account for the difference in flexitime usage between the mail (16.8 percent) and phone (5.0 percent) surveys. The phone survey included firms with 500 or more employees while firms in the mail survey employed 20 or more workers; but Copperman's analysis of the mail sample indicated no significant relationship between firm size and flexitime use. The comparative sizes of the mail (n=1304) and phone (n=258) surveys suggesting less sampling error in the mail survey must be weighed against the possibility that flexitime users are more likely to respond to a mail survey than non-users. Thus, the overall flexitime usage rate is probably somewhere between 5.0 and 16.8 percent.

Statistics (BLS), shows that approximately 7.6 million, or about 12 percent, of American workers employed in full-time, nonfarm wage and salary jobs are on flexible schedules that permit them to vary the time they begin and end their work days (Tables 1 and 3).

Table 3 shows the number and percentage of U.S. employees using flexitime by industry group. The standard industrial classifications of finance, insurance, and real estate (17.1 percent), trade (14.7 percent), and public administration (15.2 percent) lead the industry groups in proportion of full-time workers permitted to vary their working hours. Approximately one-fifth of Federal administration workers (excluding postal workers) were on flexible schedules (more on public administration usage later).

Three other studies on flexitime usage help complete the picture of industrial use of flexitime (between 1977 and 1979). These studies are referred to above (tables 1 and 2) and described in greater detail in the following sections:

1. A 1977 survey by Nollen and Martin with 805 responses from American Management Associations (AMA) companies and suspected users of alternative schedules, and nationwide projections based on a sample size of 465 firms; 2/
2. A 1979 Copperman survey with a sample size of approximately 1,300 firms from all industrial sectors that responded to the flexitime issue; 3/
3. A 1979 Conference Board survey with responses from approximately 550 companies in five major industries. 4/

TABLE 3

NUMBER AND PERCENTAGE OF U.S. EMPLOYEES (FULL-TIME, NONFARM
WAGE AND SALARY) USING FLEXTIME BY MAJOR INDUSTRY GROUP

Industry Group	Number (in thousands) of			Percentage of Workers with Flexitime
	U.S. Workers	Workers Reporting	Workers with Flexitime	
TOTAL	67,817	64,364	7,638	11.9
Goods-Producing Industries. .	24,509	23,292	1,968	8.5
Agriculture	311	287	43	14.9
Non-Agriculture	24,199	23,005	1,926	8.4
Mining.	813	785	83	10.6
Construction.	4,389	4,129	417	10.1
Manufacturing	18,997	18,092	1,425	7.9
Durable Goods	11,548	11,002	827	7.5
Nondurable Goods. . . .	7,449	7,090	598	8.4
Service-Producing Industries. .	43,308	41,072	5,670	13.8
Transp. and Pub. Utilities. .	5,180	4,902	576	11.7
Railroads & RR Express. .	528	498	55	11.0
Other Transport	2,083	1,922	269	14.0
Communications.	1,305	1,260	166	13.2
Other Public Utilities. . .	1,264	1,221	86	7.0
Trade	11,258	10,609	1,562	14.7
Wholesale	3,041	2,876	516	17.9
Retail.	8,216	7,733	1,046	13.5
Eating and Drinking . . .	1,851	1,678	251	14.9
Other Retail.	6,366	6,055	795	13.1
Finance, Ins., & Real Estate .	4,262	4,048	693	17.1
Banking, Other Finance. .	1,989	1,906	166	8.7
Insurance and Real Estate .	2,273	2,142	527	24.6
Private H.H. Service.	371	285	36	12.6
Miscellaneous Services.	17,497	16,707	2,117	12.7
Business and Repair	2,245	2,105	328	15.6
Business	1,456	1,365	229	16.8
Repair.	790	741	99	13.4
Personal Serv., Exc. Pvt. HH .	1,062	1,019	169	16.6
Entertainment and Rec. . . .	485	446	106	23.9
Professional Services	13,625	13,064	1,491	11.4
Medical, Exc. Hospital. . .	1,945	1,847	204	11.1
Hospitals	3,049	2,919	303	10.4
Welfare and Religious . . .	1,115	1,052	243	23.1
Educational	5,822	5,651	419	7.4
Other Professional.	1,695	1,596	323	20.2
Forestry and Fisheries. . . .	79	73	22	30.7
Public Administration	4,740	4,522	686	15.2
Postal.	610	580	44	7.6
Other Federal	1,617	1,533	382	24.9
State	869	822	119	14.4
Local	1,643	1,587	141	8.9
Non-Agric., Goods & Services . .	67,506	64,077	7,596	11.9

Source: Data provided by the Bureau of Labor Statistics, U.S. Department of Labor. Material in this table is summarized in
Current Population Survey, March 1980, C-1

Nollen and Martin. This report is based on responses of 805 organizations to a mail survey on current use of flexitime and other alternative work schedule arrangements. Conducted in June and July 1977, the survey sampled two populations: (1) 2,091 organizations of which a senior manager (defined as a company president, vice president for human resources, or personnel director) had been a customer of the AMA in 1975 through 1977 (e.g., attended AMA seminars or purchased publications), and the customer's organization had more than 50 employees; and (2) 789 suspected users of one or more of the alternative work schedules being explored.

The responding firms (28 percent of all surveyed) represented several major industries and company sizes, a variety of operating and work technologies, heavy and light union membership, and male and female employment. Of those firms responding, nearly 1 in 4 reported using flexitime in their organization.

In making nationwide projections of industry usage and numbers of workers engaged in flexitime, Nollen and Martin included only the AMA-customer sample in their analysis, excluding firms surveyed as suspected users to avoid skewing the results. They also excluded firms in industrial categories where response rates were too low to be representative, and they conducted telephone interviews with 100 randomly selected nonrespondents to check further for response bias. Finally, flexitime usage rates for each industry included in the analysis were weighed by the number of firms nationwide in each industry

Based on their adjusted sample (n=465 firms), Nollen and Martin project a nationwide 1977 flexitime usage rate of 12.8 percent for nongovernment organizations having 50 or more workers; 5.8 percent of all workers (between 2.5 and 3.5 million employees), excluding self-employed people and many professionals,

managers, and salespeople who usually set their own hours were on flexitime (tables 1 and 2).

Table 4 shows Nollen and Martin's nationwide projections on industrial usage indicating the following patterns among selected industries (n=465 industries):

- o 10.3 percent in manufacturing;
- o 17.1 percent in transportation, communications, and utilities;
- o 14.4 percent in wholesale and retail trade;
- o 19.3 percent in finance and insurance; and
- o 14.4 percent in service industries.

Copperman. This 1979 survey had a data base of approximately 1,900 firms in all industrial sectors regarding their implementation or consideration of flexitime and other alternative work schedules. Data were solicited from two sources: (1) a mail survey of 5,500 private firms employing 20 or more employees that were randomly selected from the files of Dun and Bradstreet (close to 500,000 employees were covered) and (2) a telephone survey administered by Dun and Bradstreet of 258 private companies employing 500 or more employees.

The firms responding to the two surveys (there was a 30 percent response rate to the mail survey) employed a total of 1,982,652 workers. Results were analyzed separately.

Findings from the mail survey indicated that approximately 17 percent of employers had implemented flexitime (table 2). These firms together employed 24 percent of the workers covered by the survey. Additionally, 17 percent were giving flexitime preliminary or serious consideration.

TABLE 4
PERCENTAGE OF FIRMS USING FLEXITIME
WITHIN VARIOUS INDUSTRIES

Industry ¹	Data Source				
	Nollen & Martin (1977) Sample (n=465) Projected (U.S.)		Copperman (1979) Sample (n=1304)	Conference Board (1979) Sample Blue Collar (n=354) White Collar (n=541)	
Manufacturing	12.4	10.3		3.0	13.0
Non-Durable			16.7		
Durable			12.7		
Transportation, Communication, & Utilities	16.0	17.1	17.3	--	4.0
Gas/Electric					
Trade	17.0	14.4			
Wholesale			18.3		
Retail			20.6		
Finance, Insurance, & Real Estate	22.7	19.3	24.6		
Banking				--	15.5
Insurance				--	34.0
Services	11.8	14.4	16.0		

¹Each of the three studies cited uses a slightly different industrial classification scheme. Raw data available from the Copperman study also include percentages of flexitime use in agriculture (26.7%), mining (23.6%), and construction (17.6%) firms. However, the sample sizes for these industries are so small that these responses are essentially meaningless.

When analyzing possible adoption patterns in the mail survey, Copperman found no statistically significant relationships between the company's position on flexitime and the size of the firm, the firm's industrial classification (see table 4), the percentage of white or blue collar workers, or the number of years the firm had been in business.

Conference Board. During 1979, the Conference Board conducted a survey of companies regarding hours of work, pay practices, wage and salary policies, and employee relocation. Respondents included a diverse industrial mix: 328 manufacturing, 26 gas and electric utilities, 26 retail trade, 131 banking, and 56 insurance companies. (Retail firms were excluded from The Board's final analysis due to a low response rate.)

Number of employees was one criterion for inclusion in the survey; minimum numbers of employees for inclusion were 200 for manufacturing and retail trade, 100 for utilities, and 50 for banking and insurance firms. The Board sought information for nonexempt nonoffice personnel (e.g., production, maintenance, sales clerks), nonexempt office personnel in clerical and technical positions, and lower-level exempt personnel in professional and technical positions, (e.g., first-line supervisors, sales managers).

Around 15 percent of the respondents provided flexitime programs allowing white-collar employees to arrange their own daily schedules within a specified core day, but only 3 percent of respondents did so for blue-collar workers (tables 2 and 5).

Insurance firms showed the highest usage, 34 percent; the majority of these firms involved more than half of their non-exempt office and clerical and lower level exempt personnel (tables 4 and 5).

TABLE 5
FLEXITIME USAGE BY INDUSTRY AND EMPLOYEE GROUP
IN SELECTED INDUSTRIES

Practice	Total Respondents						Manufacturing						Gas & Electric Utilities						Banking				Insurance			
	Nonexempt						Nonexempt						Nonexempt						Nonexempt				Nonexempt			
	Production or Operations		Office and Clerical		Lower level Exempt		Production		Office and Clerical		Lower level Exempt		Operations		Office and Clerical		Lower level Exempt		Office and Clerical		Lower level Exempt		Office and Clerical		Lower level Exempt	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Total Respondents	354	100	541	100	541	100	328	100	328	100	328	100	26	100	26	100	26	100	131	100	131	100	56	100	56	100
Respondents with programs	11	3	87	16	78	14	11	3	46	14	39	12	--	--	1	4	1	4	21	16	19	15	19	34	19	34
For respondents with programs:	11	100	87	100	78	100	11	100	46	100	39	100	--	--	1	100	1	100	21	100	19	100	19	100	19	100
Percent of employees so scheduled																										
Under 10		11		31		33		11		24		24		--	100		100		63		61		6		19	
10--24		44		19		19		44		24		24		--	--		--		16		22		13		6	
25--49		11		4		4		11		5		3		--	--		--		--		6		6		6	
50 and over		33		46		43		33		48		50		--	--		--		21		11		75		69	

Source: The Conference Board Information Bulletin;
Harriet Gorlin, Personnel Practices II: Hours of Work, Pay Practices, Relocation; Number 92, 1981.

Occupational Use

Flexitime is most widespread among sales personnel, managers and officials, professional workers, and transportation equipment operatives--occupations in which the practice is long-standing and often informal, according to the press release on a BLS survey, issued February 24, 1981. The use of flexitime by clerical and service workers represents the recent growth of flexitime systems. Table 6, which shows the number and percentage of full-time nonfarm employees on flexitime by occupational breakdown, was derived from raw data made available by BLS.

Government Use of Flexitime

The BLS press release accompanying the 1980 Population Survey on flexitime use attributes the high usage (25 percent) by federal workers to passage of legislation (the Federal Employees Flexible and Compressed Schedules Act of 1978), allowing a 3-year federal experiment on flexible schedules and compressed workweeks that began in March 1979. According to the Project Director of the Alternative Work Schedules Experiment (Office of Personnel Management), approximately 150,000 federal employees are participating in flexitime programs under the trial program. An additional estimated 250,000 federal employees are on flexitime outside the experiment. 5/

As reported in the 1981 State Alternative Work Schedule Manual published by the National Council for Alternative Work Patterns and the National Governors' Association, flexitime is the most prevalent type of alternative work scheduling arrange-

TABLE 6

NUMBER AND PERCENTAGE OF U.S. EMPLOYEES (FULL-TIME, WAGE AND SALARY) USING FLEXTIME BY MAJOR OCCUPATION GROUP

Occupational Group	Number (in thousands) of			Percentage of Workers with Flexitime
	U.S. Workers	Workers Reporting	Workers with Flexitime	
Nonfarm	67,817	64,364	7,804	11.9
Professional/ Technical	12,157	11,644	1,839	15.8
Managers & Adm.	8,168	7,665	1,550	20.2
Clerical	13,152	12,572	1,237	9.8
Sales Workers	3,379	3,165	840	26.5
Crafts & Kindred Operatives, except Transport	10,047	9,589	711	7.4
Transport Equip- ment Operatives	8,717	8,271	363	4.4
Laborers	2,670	2,514	359	14.3
Service	2,895	2,737	200	7.3
	6,632	6,206	539	8.7
Farm	825	777	166	21.3
TOTAL	68,642	65,141	7,804	12.0

Source: U.S. Department of Labor, Current Population Survey, May 1980 Supplement (raw data files).

ment used by state governments.^{6/} Agencies in 42 states allow some form of flexitime. Some programs are available to certain employees in a few agencies or departments, and others are permitted on an informal basis by agency directors. The results of the survey suggest that flexitime is considered most suitable for workers in traditional office settings and most commonly involves professional, supervisory, and clerical workers. While no category typically is excluded from participation, there are relatively few programs in which craft workers or operatives participate. When categories are specifically excluded, they are generally those in facilities with continuous operations, such as state-operated hospitals. However, in some cases, workers in 24-hour shift operations are allowed to use flexitime.

To obtain information on alternative work schedules in every state, several survey instruments were used. First, all 50 state personnel directors were asked to provide a listing of agencies and departments in their respective states that had ongoing alternative work schedule programs. Then the agencies identified as having programs were sent questionnaires requesting detailed information on their programs. State personnel directors were asked to complete a separate questionnaire covering statewide involvement with alternative work schedules, and non-respondents were contacted again so that a response from at least one agency in every state was obtained. The bulk of the substantive information on alternative work schedule programs is contained in individual state entries in the book. While some of these entries include the number of employees involved in the various

work scheduling programs, there are insufficient data to enable projection of the number of state workers engaged in flexitime.

Limitations in Use of Flexitime

According to the BLS survey, one of the lowest rates of flexitime use occurred in the manufacturing industry, with 7.9 percent of manufacturing full-time wage and salary workers reporting they were on flexitime schedules (table 3).

Of the 328 manufacturing firms responding to the Conference Board survey, only 11 firms, or 3 percent of manufacturers, had flexitime programs for their production workers (table 5).

The use of flexitime in some work activities was reported to be unfeasible by 20 to 30 percent of all experienced users in the Nollen and Martin survey.² These activities were identified as shift work and assembly line or other machine-paced work, work where continuous coverage is needed, work in small organizations or where there are few workers, and jobs where extensive communication and interface are needed.

Nollen later reported in an Across the Board article (April 1980)^{7/} that the "toughest spots" for flexitime are production units with assembly lines and multiple shifts. He noted that workers cannot come and go as they please "when work stations have to be continuously staffed and the pace of work is controlled by machine." He further mentioned certain positions or job holders for which flexitime is difficult to arrange, such as receptionists, retail sales clerks, workers in shipping and receiving rooms and mail rooms, nurses, bus drivers, security guards, radio announcers, and persons in very small work units--

all jobs in need of continuous coverage and thus presenting more problems to flexible scheduling.

Future of Flexitime Usage

Use of flexitime is expected to increase over the next decade; several studies support this prediction. One is the General Mills report on the American family, Families at Work: Strengths and Strains--released in May 1981.^{8/} Among the issues covered in the study was the balancing of demands of work and family through changes in work scheduling.

The study, a telephone survey conducted by Louis Harris and Associates, included three sample groups: 1,502 adult family members, 235 teenagers (drawn from households in which an adult family member had been interviewed), and a leadership group composed of 52 feminists, 49 family traditionalists, 56 labor leaders, and 104 human resource officers (i.e., senior vice presidents or vice presidents in the offices of human resources whose responsibilities included personnel and employee relations, sampled randomly from lists of Fortune 1300 companies).

Both corporate and labor leaders thought flexitime work schedules would be helpful to families, and a majority of corporate leaders expected their companies to adopt a variety of approaches to allow more flexible work schedules. When asked which policy they expected their organizations to adopt in the next five years, 66 percent of the corporate leaders selected the response, "freedom to set a work schedule as long as they work 70 hours every 2 weeks," while 60 percent said, "a choice between a 7 to 3, 8 to 4, or 9 to 5 workday." Notably, 20 percent of company representatives said their organizations already offer the free choice of schedules within the 70-hour biweekly period and 28 percent indicated they have adopted the 7-3, 8-4, 9-5 option.

A newly published Work in America Institute policy study titled New Work Schedules for a Changing Society predicts that by 1990, 25 percent of full-time nonfarm workers in the United States will be on flexitime work schedules.^{9/} Comparing the Nollen and Martin 1977 estimates of flexitime usage--5.8 percent of all employees who are not professional, managers, or sales workers--with the 1981 BLS statistics showing an 8.1 percent usage (after professional and technical workers, managers and administrators, and sales workers have been excluded), the report concludes that use of flexitime has already increased substantially, by as much as 40 percent, over the last four years.

The National Council for Alternative Work Patterns reports that a number of major corporations and small companies are seriously considering flexitime as an option or have adopted flexitime during 1981. Among those that have recently started programs is IBM. While the program offers less flexibility than it might (the flexible bands are only a half-hour long), it does involve 19,000 employees. The Council's forecast that interest in flexitime will remain high is confirmed by manufacturers of time-recording equipment used in some flexitime programs.^{10/}

IMPLEMENTATION OF COMPRESSED WORKWEEK

Information on implementation of compressed workweeks comes from several sources: the Bureau of Labor Statistics, the Conference Board survey, and the Nollen and Martin study, among them. The BLS Current Population Survey, May 1980, also contains information on compressed workweek usage. As of May 1980, 1.9 million, or 2.7 percent; of full-time nonfarm

American workers were on compressed workweeks of 3, 4, or 4½ days. This marked an increase from the May 1973 figure of 1.7 percent.

Table 7 shows the percentage of full-time employees on compressed workweek schedules in 1973 and 1980, by major occupational group and industry. Compressed workweeks were more common among certain occupations--service workers (6.7 percent), transportation equipment operatives (4.4 percent), and factory operatives (3.3 percent)--than for the work force as a whole (2.7 percent). By industry, use was highest in local public administration (10.8 percent), a category that (according to BLS) comprises police and fire personnel. Use of compressed workweeks is least common in the finance, insurance, and real estate industry.

The Conference Board 1979 study also examined use of compressed workweek schedules. Compressed workweek schedules (that is, "full-time schedules, worked in shortened workweeks of less than five days") for some or all employees were reported by fewer than 10 percent of all responding firms. Most of the reported schedules were based on a 3- or 4-day week, with insurance companies favoring the 3-day week (28.5 percent of responding insurance companies used compressed workweeks). Overall, in most companies having compressed workweek schedules, fewer than 10 percent of employees were involved. The industry breakdown is shown on Table 8.

Based on responses from 155 organizations using one or more compressed workweek schedules, Nollen and Martin found that most organizations use the schedule only in selected work units. Among users, there was greater implementation in manufacturing plants

TABLE 7

PERCENTAGE AND NUMBER OF U.S. EMPLOYEES (FULL-TIME, NONFARM
WAGE AND SALARY) ON COMPRESSED WORKWEEK SCHEDULES OF 4½ DAYS OR LESS
BY MAJOR OCCUPATIONAL GROUP AND INDUSTRY
MAY 1973 AND MAY 1980

Category	Total Number of U.S. Workers (in thousands) by Occupation & Industry	Number (in thousands) of Workers Using Schedules of 4½ Days or Less		
		Percentage		Number
		1973	1980	1980
<u>Occupation</u>				
Professional & Technical Workers	12,115	0.9	2.5	303
Managers & Administrators	8,032	0.8	1.1	88
Sales Workers	3,313	1.6	1.9	63
Clerical Workers	13,227	1.0	1.7	225
Craft Workers	10,182	1.4	2.4	244
Operatives, except Transport	8,794	1.3	3.3)	290
Transport Equipment Operatives	2,713	3.4	4.4)	
Laborers	2,937	2.6	2.5	73
Service Workers	6,545	5.3	6.7	439
<u>Industry</u>				
Goods Producing	24,685	1.2	2.5	--
Mining	833	1.3	2.0	17
Construction	4,352	2.1	3.4	148
Manufacturing	19,194	1.0	2.2	422
Service Producing	43,173	2.0	2.9	--
Transportation & Public Utilities	5,298	2.2	2.7	143
Wholesale & Retail Trade	11,109	1.4	2.4	267
Finance, Insurance, and Real Estate	4,240	1.7	1.8	76
Miscellaneous Service	17,756	1.8	3.0	--
Professional	16,638	1.4	2.8	382
All Other	4,118	2.9	3.6	148
Public Administration	4,771	4.1	5.2	--
Federal	2,243	0.1	1.6	--
Postal	620	0.2	0.5	--
Other	1,623	0.1	2.1	34
State	865	1.5	3.6	31
Local	1,663	11.9	10.8	180

Source: U.S. Bureau of Labor Statistics, "Ten Million Americans
Work Flexible Schedules, 2 Million Work Full Time in
3 to 4½ Days," U.S. Department of Labor, Office of
Information, News Release, February 24, 1981.

TABLE 8

COMPRESSED WORKWEEK USAGE BY INDUSTRY AND EMPLOYEE GROUP
IN SELECTED INDUSTRIES

Practice ¹	Total Respondents						Manufacturing						Gas & Electric Utilities						Banking				Insurance			
	Nonexempt						Nonexempt						Nonexempt						Nonexempt				Nonexempt			
	Production or Operations		Office and Clerical		Lower level Exempt		Production		Office and Clerical		Lower level Exempt		Operations		Office and Clerical		Lower level Exempt		Office and Clerical		Lower level Exempt		Office and Clerical		Lower level Exempt	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total Respondents	354	100	541	100	541	100	328	100	328	100	328	100	26	100	26	100	26	100	131	100	131	100	56	100	56	100
Respondents with programs	23	6	50	9	37	7	22	7	13	4	11	3	1	4	—	—	—	—	19	14	12	9	18	32	14	25
For respondents with programs: Number of days in the shortened workweek	23	100	50	100	37	100	22	100	13	100	11	100	1	100	—	—	—	—	19	100	12	100	18	100	14	100
2		4		—		3		5		—		9		—		—		—		—		—		—		—
3		4		46		38		5		15		9		—		—		—		47		42		67		57
3½		9		2		5		9		8		18		—		—		—		—		—		—		—
4		78		46		43		77		77		55		100		—		—		53		58		17		21
4½		4		6		11		5		—		9		—		—		—		—		—		17		21
Percent of employees so scheduled																										
Under 10		64		89		87		62		83		89		100		—		—		94		91		87		80
10—24		23		—		—		24		—		—		—		—		—		—		—		—		—
25—49		5		2		—		5		8		—		—		—		—		—		—		—		—
50 and over		9		9		13		10		8		11		—		—		—		6		9		13		20

¹Some or all employees work the normally scheduled number of hours in less than 5 days a week.

Source: The Conference Board Information Bulletin; Harriet Gorlin, Personnel Practices II: Hours of Work, Pay Practices, Relocation; Number 92, 1981.

and warehouses than in office operations.

Manufacturing firms using compressed workweeks appear to have better experiences, e.g., increased efficiency, than do user firms in finance and insurance, while goods producers appear to have better experiences than do service producers. Nollen and Martin attribute the more positive experiences of manufacturers and goods producers to the reduced number of start-ups and shutdowns and the better integration of capital equipment which compressed workweeks allow. Reports of greater fatigue under compressed workweeks were more prevalent among finance and insurance users (64%) than manufacturing users (42%) in the Nollen and Martin study.

Nollen and Martin concluded that 4-day operations are more likely to be self-contained, with shutdowns on the fifth day, while the 3-day weeks usually are confined to certain work units, e.g., electronic data processing departments. About 15 percent of users considered compressed workweeks not feasible where regular 5-day coverage is required (e.g., shipping and receiving department, maintenance services, and security), unless there are two teams, each with a different day off, so that all 5 days are covered by at least a partial staff. Twenty percent of the respondents indicated that compressed workweeks were unworkable in units in which there was customer contact. Nollen summarized in his Across the Board article: "Compressed workweeks are fussy about where they are used. They can help businesses that have costly startups and shutdowns, underutilized capital equipment, and travel time to job sites."¹¹/ He cited as examples of possibly successful settings a police department using three 10-hour shifts per day to get 6 hours of double staffing during high-crime

Use of Compressed Workweek in the Construction Industry

According to the Construction Labor Research Council (CLRC), Washington, D.C., the unionized segment of the construction industry is increasingly engaging in two types of a compressed workweek schedule: ^{12/}

- o 4-40, four 10-hour days, followed by 3 days off, and
- o Rolling 4-10, with four 10-hour days, followed by 4 days off.

In the first type, a worker is on the job 40 hours over a 7-day period; in the rolling 4-10 schedule, the worker is on the job 40 hours over an 8-day period. The rolling 4-10 requires two work teams, each team rotating the 4-days on, 4-days off intervals.

The executive director of the CLRC, Bob Gasperow, indicated that the 4-40, 3-days-off schedule is used primarily at new construction sites, while the rolling 4-10 is used principally on maintenance contracts for projects involving major capital investment necessitating continual maintenance and/or major overhaul to ensure that the equipment is operational at all times. Maintenance contracts usually involve such facilities as nuclear plants, refineries, chemical plants, and steel plants. Three Mile Island Nuclear Plant and Big Bend Atomic Power Plant in Baton Rouge, Louisiana, are two facilities where the rolling 4-10 schedule is now in use.

According to Gasperow, the 4-40, 3-days-off schedule is more widely used than the rolling 4-10. However, both are extensively used on the Gulf Coast. CLRC, a research arm for construction managers, analyzes most of the construction labor agreements negotiated throughout the country. For a fee of \$400, CLRC could provide a detailed listing of contracts providing for compressed workweek schedules, the construction craft covered,

the city, and the number of workers involved in the contract. Lieb, Lefkowitz did not purchase this information because the cost was not factored into our proposal bid. Sample pages from the computer run are attached as Appendix A (see item A-9).

The Associated General Contractors of America citing CLRC data noted that at least 38 collective bargaining agreements now in effect in the construction industry provide for compressed workweeks, with overtime rates applicable for work in excess of 40 hours per week (or more than 10 hours per day). Table 9 shows city and crafts for construction contracts.

Government Use of Compressed Workweek

Approximately 175,000 federal employees are working compressed schedules, with an estimated split of 75,000 on 4/40 schedules and 100,000 on 5/4-9 schedules. The Office of Personnel Management evaluation of compressed schedule use shows an overall success rate by federal agencies participating in the 3-year experiment of 76.2 percent and a failure rate of 10.5 percent (the remaining agency evaluations were neutral). The success rate was higher for outdoor worksites for both the 5/4-9 plan (95.2 percent) and the 4-40 approach (90.8 percent) than for office situations (68.1 percent and 79.3 percent, respectively). ^{14/}

According to the State Alternative Work Schedule Manual, 32 states have compressed workweek programs, but usually in only a few agencies. Most of the compressed workweek programs described in the manual follow a 10-hour-per-day schedule, but there is some use of other variations, such as 5 days one week, 4 days the following week. There are also a few instances of compressed schedules for 24-hour shift operations, such as fire fighters employed at state facilities. In contrast to flexitime

TABLE 9

FEBRUARY 27, 1981 CONTRACTS WITH 4-10s*

<u>City</u>	<u>Craft</u>
Birmingham, Alabama	Ironworkers
Birmingham, Alabama	Millwrights
Mobile, Alabama	Bricklayers
Mobile, Alabama	Carpenters
Mobile, Alabama	Cement Masons
Mobile, Alabama	Operating Engineers
Mobile, Alabama	Ironworkers
Mobile, Alabama	Laborers
Mobile, Alabama	Millwrights
Mobile, Alabama	Teamsters
Miami, Florida	Pipefitters
Pensacola, Florida	Carpenters
Pensacola, Florida	Cement Masons
Louisville, Kentucky	Boilermakers
Baton Rouge, Louisiana	Lathers
Baton Rouge, Louisiana	Painters
Baton Rouge, Louisiana	Pipefitters
New Orleans, Louisiana	Asbestos Workers
New Orleans, Louisiana	Operating Engineers
New Orleans, Louisiana	Glaziers
Akron, Ohio	Pipefitters
Muskogee, Oklahoma	Cement Masons
Tulsa, Oklahoma	Cement Masons
Abilene, Texas	Bricklayers
Ft. Worth, Texas	Operating Engineers
Galveston, Texas	Bricklayers
Galveston, Texas	Cement Masons
Houston, Texas	Asbestos Workers
Houston, Texas	Boilermakers
Houston, Texas	Bricklayers
Houston, Texas	Carpenters
Houston, Texas	Cement Masons
Houston, Texas	Floor Coverers
Houston, Texas	Pipefitters
Houston, Texas	Plumbers
Houston, Texas	Sheet Metal Workers
Whichita Falls, Texas	Ironworkers
Salt Lake City, Utah	Glaziers

* Information obtained from the Construction Labor Research Council, as cited in the Hearing Record for S. 398.

use by states, compressed schedules are often used for workers in non-office settings. Numerous states have implemented compressed workweek programs for their highway maintenance crews. Other frequent users of compressed schedules are employees in data processing units, where use of computers must sometimes be shared with other state agencies and be scheduled well in advance, and operators of equipment and machinery which can be more efficiently used by having fewer start-up and slowdown periods. ^{15/}

Future of Compressed Workweek Usage

Future use of compressed workweeks likely will depend on a number of factors, among them legislation, the energy situation, and the perceptions of companies and workers.

Approximately half of the human resource officers responding to the General Mills survey mentioned in the preceding section thought their organizations likely during the next five years to adopt a 4-day week (with longer hours each day), followed by a 3-day break, and 28 percent said their organizations already had adopted such a schedule. (Incidentally, 47 percent of human resource officers and 34 percent of labor leaders did not think that a compressed workweek would help employees balance work and family responsibilities better; while more than 60 percent of working men and women, working mothers, and women planning to enter the work force thought compressed workweeks would help somewhat or a great deal in balancing work and family responsibilities.)

Work in America forecasts that 5 percent of all U.S. workers will use compressed workweeks by 1990. (The Institute also predicts

a standard workweek of 36 hours, with "new options for the nine-hour day, four-day weeks, as a pattern to eventually replace the eight-hour day, five-day week.")^{16/}

The extent to which use of compressed workweeks will increase depends, to some degree, on enactment of legislation suspending the Walsh-Healey Act daily overtime provisions. Legislation has been introduced in the United States Senate (S. 398) to amend the Walsh-Healey and the Contract Work Hours Acts so as to allow for implementation of a 10-hour, 4-day work schedule without overtime pay. Walsh-Healey applies to workers employed by firms holding federal supplies contracts exceeding \$10,000 (e.g., manufacturers supplying army blankets, petroleum companies supplying fuel, or industrial companies supplying equipment to the armed services). The Contract Work Hours Act applies to federally assisted construction contracts exceeding \$2,000 and federal service contracts exceeding \$2,500 (service contracts include equipment repairs, security guards, and janitorial services). Both acts contain provisions mandating pay at time-and-one-half for work performed in excess of 8 hours a day or 40 hours a week.

In hearings held March 10, 1981, before the Senate Subcommittee on Labor of the full Senate Committee on Labor and Human Resources, a number of major associations representing hundreds of thousands of employees--the National Association of Manufacturers (NAM), Chamber of Commerce of the United States (Chamber), and Associated General Contractors of America, among them--testified in support of S. 398.^{17/} If this legislation were to pass, the trade associations

expect a number of their member companies to move to 4-40 compressed workweek schedules.

The bill was approved by the Subcommittee, but has not been scheduled for markup before the full Committee. The AFL-CIO, which also presented testimony, strongly opposes the legislation. Prospects for passage are uncertain.

Legislation affecting the 3-year Federal flexible and compressed workweek schedule experiment will also affect future use. The experiment will end in March 1982, unless legislation is passed providing either for a temporary extension of the experiment or for the permanent exemption of provisions of labor laws affecting Federal employee overtime payments and permitting daily variations in schedules as long as employees work an average 80 hours each two weeks. If the experiment were to terminate completely, use of compressed workweeks in the federal government would virtually be eliminated. The Office of Personnel Management will soon submit an interim report to Congress with recommendations. Information made available to us indicates that 83 percent of federal organizations on flexible and/or compressed workweek schedules would continue their programs if permitted. ^{18/}

Aside from the legal disincentives for implementing compressed workweeks, employers examining this schedule for possible adoption look at the relatively high failure rate of compressed workweek programs in contrast with the highly-visible successes of flexitime programs. Among the compressed workweek users identified in the Nollen and Martin study, 59 organizations (or 28 percent) had discontinued this schedule. (There are numerous examples in the

literature of successful implementation of compressed workweek schedules by companies in different industrial settings.)

Another factor that could influence use of compressed workweeks is energy/gasoline shortages. Work in America reports an increase in use of compressed workweeks between 1973 and 1975 (see Chart 1), which the organization attributes partly to concern over gasoline shortages. Further, the organization believes the 1980 usage rate may reflect gasoline shortages of the spring and summer of 1979.

The National Council for Alternative Work Patterns reports that many of the local and regional governments that have developed contingency plans to be used during gas shortages recommend expanded use of flexitime or 4-day compressed workweek programs during such periods.^{19/} In at least two states, compressed workweek programs were initiated by governors as a conservation measure during a period of energy crisis and discontinued once the immediate crisis had passed. ^{20/}

Implementation of 12-Hour Shifts

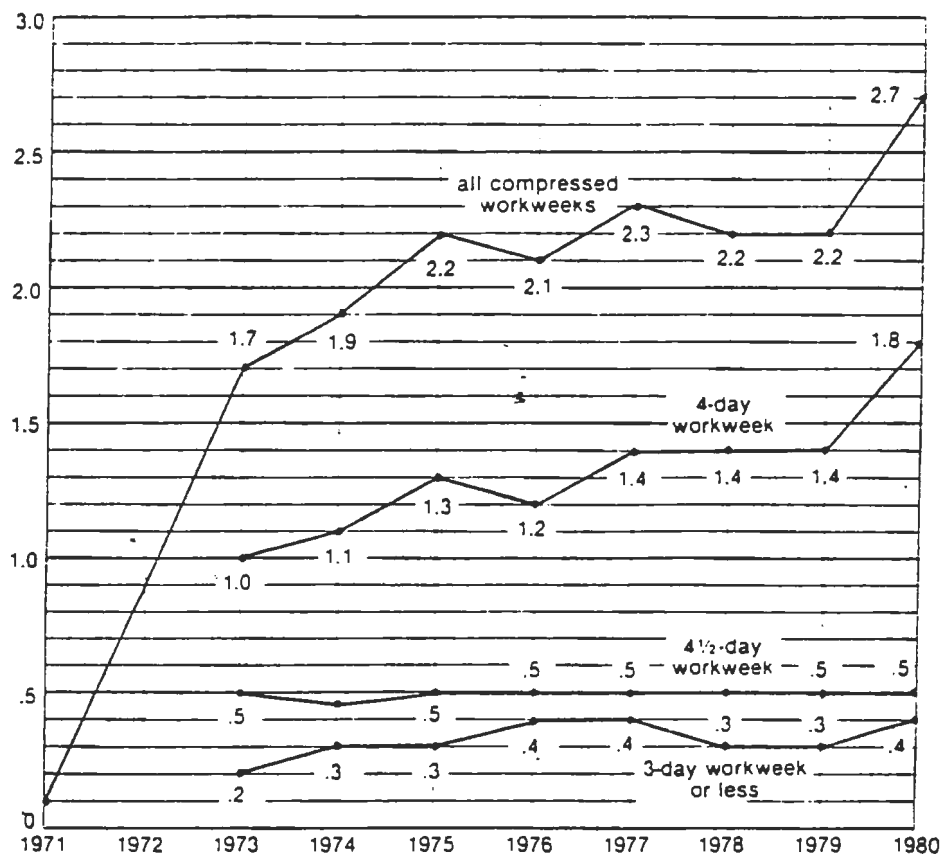
An apparent increase in adoption of 12-hour shifts in the refining and petroleum industry prompted the American Petroleum Institute in 1978 to conduct a survey of American and Canadian companies to determine use and compare experiences of users of 12-hour-day schedules versus 8-hour-day schedules.^{21/} Questionnaires were sent to 961 plant managers. The 326 replies received represented more than 66,000 employees on rotating shift schedules.

The largest response group was made up of plants on 8-hour-day schedules, representing more than 58,000 employees at 250 locations. The group on 12-hour-day schedules (that had changed from 8-hour shifts) comprised 73 locations and affected almost 8,300 employees.

CHART 1

GROWTH OF COMPRESSED WORKWEEKS

Percent of all nonfarm
wage and salary workers
who work fulltime



Sources: Janice Neipert Hedges, "How Many Days Make a Workweek?" Monthly Labor Review, April 1975, pp. 29-36. U.S. Department of Labor, Bureau of Labor Statistics, news release, February 24, 1981, as cited in New Work Schedules for a Changing Society, Work in America Institute, 1981

Additional information on 12-hour shifts (accident rates for users in the petrochemical industry) is presented in a later section of our report (see pages 53-54).

Herbert Northrup and others conducted a field survey of managers in 50 American and Canadian chemical and petroleum plants that have instituted 12-hour shifts. Findings are reported in Industrial and Labor Relations Review.^{22/} The authors noted that the 12-hour shift has spread more rapidly among chemical, petrochemical, and petroleum facilities than among other continuous operation industries because the work in these facilities is less arduous and unionization has been less complete.

Anecdotal evidence reported to the National Council for Alternative Work Patterns indicates successful adoption of 12-hour shifts in computer and data processing operations.

IMPLEMENTATION OF PART-TIME

The Current Population Survey, a national sample survey of households conducted for BLS, defines part-time workers as those who worked 1 to 34 hours during the survey week and includes temporary, intermittent, voluntary and involuntary part-time workers.

In 1977, 22.1 percent of all wage and salary workers, or 17.6 million people, were part-time employees, up from a little more than 15 percent in 1954 and 21.5 percent in 1976. Permanent part-time workers--those regularly working part-time by choice--accounted for 13.9 percent of workers, or 11.1 million people, in 1977. This also marked an increase, from 8 percent in 1976. In 1979, part-time workers accounted for 22.2 percent of all workers, with permanent part timers accounting for 13.8 percent of all workers.

Partially offsetting the relative growth in part time was an increase (from 17.5 to 18.9 hours worked per week) in the average hours of those who usually work part time.^{23/}

The rate of growth of part-time employment between 1954 and 1977 was much higher than the rate for full time, 140 percent versus 50 percent. As a result, the proportion of all employees at work part time increased from roughly 1 in 6 workers in the 1950's to 1 in 5 in 1977.

The growth of service industries has been an important factor in making part-time opportunities more available. The greatest growth rates in the service sector have been in the industries that have the highest proportion of voluntary part timers, such as finance, insurance, and real estate, and wholesale and retail trade.

Tables 10 and 11 show part-time employment in 1977, by industry and occupation. Occupations in which part-time workers were concentrated were mainly routine and low-skill occupations, such as laborers in the blue-collar sector and sales and clerical workers in white-collar occupations. Within the white-collar group, managers were least likely to work part time, followed by professional workers. In blue-collar occupations, the proportion working part time was lowest for skilled workers.

In Copperman's study, 22 percent of the 334 responding firms had implemented part-time programs. The survey found a significant relationship between the company's position on part-time and industrial sector: implementation was substantially higher in the wholesale and retail trades, finance, insurance, and real

TABLE 10
PERCENTAGE OF WAGE AND SALARY WORKERS IN NONAGRICULTURAL INDUSTRIES,
BY FULL- AND PART-TIME STATUS AND INDUSTRY, MAY 1977

Industry group	Total		Full time ¹	Total	Part time ²				Employed but not at work
	Number in thousands	Percent			Usually full time		Usually part time		
					Involuntary or economic reasons	Voluntary or non-economic reasons	Involuntary or economic reasons	Voluntary or non-economic reasons	
Total	73 441	100.0	74.6	21.3	1.3	4.6	1.9	13.3	4.1
Goods producing	25 527	100.0	82.9	12.5	2.1	6.0	.9	3.7	4.4
Mining	781	100.0	82.6	11.0	1.2	7.7		2.2	6.5
Construction	4 508	100.0	79.6	17.5	3.8	6.6	2.2	5.0	2.9
Manufacturing	20 238	100.0	83.7	11.6	1.8	5.7	.7	3.4	4.7
Service producing	52 914	100.0	70.6	25.4	.9	4.2	2.4	17.9	3.9
Transportation and public utilities	5 437	100.0	80.3	13.3	.9	4.9	1.3	6.2	6.4
Wholesale and retail trade	16 448	100.0	63.2	33.2	1.1	3.2	3.5	25.4	3.6
Finance, insurance, and real estate	4 509	100.0	80.1	15.9	1.0	4.7	1.0	9.1	4.0
Service	21 577	100.0	68.8	27.6	.9	4.3	2.4	19.9	3.5
Public administration	4 941	100.0	84.4	12.1	.3	5.8	.5	5.2	3.5

¹ 35 hours or more
² 1 to 34 hours

NOTE: Because of rounding, detail may not equal totals

Source: William V. Deutermann, Jr., and Scott Campbell Brown,
"Voluntary part-time workers: a growing part of the
labor force," Monthly Labor Review, June 1978, pp 3-10.
The primary data source for the authors is the BLS
Current Population Survey, May 1977.

TABLE 11
PERCENTAGE OF WAGE AND SALARY WORKERS IN NONAGRICULTURAL INDUSTRIES,
BY FULL- AND PART-TIME STATUS AND OCCUPATION, MAY 1977

Occupation	Total		Full time ¹	Total	Part time ²				Employed but not at work
	Number in thousands	Percent			Usually full time		Usually part time		
					Involuntary or economic reasons	Voluntary or non- economic reasons	Involuntary or economic reasons	Voluntary or non- economic reasons	
Total	79 036	100.0	74.4	21.6	1.3	4.8	1.9	13.5	4.1
White collar	40 236	100.0	78.7	19.8	5	4.3	1.4	13.5	3.5
Professional technica	12 286	100.0	79.7	17.0	5	4.5	1.1	10.9	3.1
Managerial	7 575	100.0	89.7	7.1	2	3.6	1	3.3	3.2
Sales	4 933	100.0	65.8	30.6	1.2	3.4	2.3	23.8	3.5
Clerical	15 443	100.0	71.4	24.7	7	4.8	2.0	17.2	3.8
Blue collar	28 286	100.0	79.5	16.8	2.4	5.7	1.7	7.0	4.7
Skilled Operatives except transport	10 619	100.0	84.7	11.2	1.8	5.7	7	2.9	4.2
Operatives transport	10 106	100.0	78.3	16.6	3.0	6.6	1.5	5.5	5.1
Laborer	3 289	100.0	77.3	16.0	1.8	4.0	1.2	9.1	6.7
	4 261	100.0	64.6	31.7	3.0	4.8	5.0	18.9	3.7
Service except private household	10 517	100.0	54.7	40.8	1.2	4.1	4.5	31.0	4.5

1 35 hours or more
2 1 to 34 hours

NOTE: Because of rounding, detail may not equal totals.

¹ 35 hours or more
² 1 to 34 hours

NOTE: Because of rounding, detail may not equal totals.

Source: William V. Deutermann, Jr., and Scott Campbell Brown, "Voluntary part-time workers: a growing part of the labor force," Monthly Labor Review, June 1978, pp 3-10. The primary data source for the authors is the BLS Current Population Survey, May 1977.

estate, and service industries than in other industries (see table 12).

The Nollen and Martin survey similarly found a concentration of part-time employment in the trade and service industries, and, among service, sales, and clerical workers. Only 4.3 percent of manufacturing workers were part-timers.

Permanent part-time in the government. Legislation establishing part-time career employment programs in federal agencies was approved during the 95th Congress, 2nd Session, having been introduced and considered by Congress in various forms since 1971. Designed to ensure that part-time career opportunities exist as an employment option in the federal government at all grade levels, the Federal Employees Part-Time Career Employment Act became public law (PL 95-437) on October 10, 1978. The Office of Personnel Management has jurisdiction over this matter. Between fall 1977 (when then President Carter directed federal agencies to expand permanent part-time) and December 1980, the number of career part-time employees in the federal government increased by almost 30,000. Based on a 20,000 increase by 1980, about 6,000 permanent part-timers were at the GS5 level and above and about 1,200 at the GS11 level and above. ^{24/}

During the past several years, there has been a substantial increase in implementation of permanent part-time programs by states. The State Alternative Work Schedule Manual reports that in 1981, 34 states allow permanent part-time employment in state agencies, and that 19 have job-sharing programs for their employees. Some permanent part-time and job-sharing programs are statewide; others are in selected agencies. In 1977, only five states had adopted permanent part-time policies. ^{25/}

TABLE 12

COMPANIES' POSITIONS ON PART-TIME OPTIONS BY
STANDARD INDUSTRIAL CLASSIFICATION (SIC):
MAIL SAMPLE

SIC	IMPLEMENTED	BEGINNING IMPLEMEN- TATION	SERIOUS CONSIDERATION	PRELIMINARY CONSIDERATION	NOT CONSIDERED	TOTAL
Agriculture	19%	6%	6%	19%	50%	100%
Mining	—	—	—	14%	86%	100%
Contract Construction	4%	4%	16%	19%	57%	100%
Manufacturing	18%	2%	11%	16%	53%	100%
Transportation, Communication, & Utilities	8%	—	14%	16%	62%	100%
Wholesale Trade	23%	1%	11%	16%	49%	100%
Retail Trade	23%	5%	14%	13%	45%	100%
Finance, Insurance, & Real Estate	21%	2%	6%	14%	57%	100%
Services	21%	3%	14%	17%	45%	100%
N = 334	X ² = 53.50	p = .03				

Source: Reprinted from Lois F. Copperman, "Alternative Work Policies in Private Firms," The Personnel Administrator, October 1979.

Job Sharing. Job sharing for office and clerical workers had been adopted by 12 percent of banks and 11 percent of insurers responding to the Conference Board survey. Implementation in manufacturing and utility groups and for blue-collar workers was negligible.

Human resource leaders responding to the General Mills survey indicated that 12 percent of their companies had adopted job-sharing arrangements, and 70 percent of them expect their organizations to implement job sharing during the next five years. Despite organizational policies permitting job sharing, however, the number of actual employees participating is still very low, according to the National Council for Alternative Work Patterns.

There are no aggregate nationwide data on the extent of use of job sharing. A 1979 survey by Gretl Meier ^{26/} showed a high percentage of job sharers among teachers and administrators. The survey also indicated an increase in the number of white-collar job-shared positions.

IMPLEMENTATION OF SHORTER STANDARD WORKWEEKS

The 68-hour workweek of 1860 has been reduced over the years to the current 40-hour workweek. Substantial reductions occurred between 1901 and 1948, when the workweek fell from 58.4 hours a week to 42.0. The Fair Labor Standards Act passed in 1938, reduced the standard workweek from 48 to 40 hours and created a premium for overtime. Since the 1940's, worktime has been further reduced by the growth of service industries and the continued decline of agriculture and the increased employment of women and youth. Also contributing to the reduction are changes

in FLSA and in collective bargaining agreements. Hedges and Taylor suggest in the March 1980 Monthly Labor Review that rising expectations and inflation have exerted some counter pressures, and that, on balance, hours reductions have proceeded slowly." ^{27/}

The average workweek for nonagricultural wage and salary employees who usually work full time declined nearly half an hour between May 1968 and May 1979, from 43.0 to 42.6 hours.

Average weekly hours reported by all nonagricultural wage and salary workers (including part-time workers) declined from 39.1 to 38.5 hours--a little more than half an hour, reflecting the shorter hours for workers on full-time schedules and the more rapid growth of part-time than of full-time workers.

Service employees at work full time reported a decline of about 2 hours in their workweek from 1968 to 1977. Although they worked about a half-hour more per week than all full-time workers in May 1968, by 1979 they worked one hour less. The workweek of full- and part-time service employees combined also declined; by 1979, the average workweek for all service workers was about 6.5 hours shorter than the all-occupation average, according to Hedges and Taylor.

Collective bargaining agreements contributed to shorter hours, especially in reducing the long workweek of police and firefighters. Further, international unions, labor councils, and union locals organized during the mid-1970's to press for adoption of a 35-hour standard workweek. Their joint objectives are to maintain job security and to reduce unemployment by creating additional job opportunities. Labor representatives are apprehensive that the overtime provision of FLSA of 1938, created to spur new employment,

has ceased to be an effective incentive for new hires as the costs of hiring, training, and paying the fringe benefits of new workers have overtaken the cost of paying premium overtime rates.

Legislation was first introduced in the 95th Congress, and reintroduced in the 96th and 97th Congress, that would reduce the standard workweek from 40 to 35 hours over a 4-year period. The legislation would also eliminate compulsory overtime, and raise the overtime rate from time-and-a-half to double time. Three days of hearings were held before the House Labor Standards Subcommittee of the Education and Labor Committee, but no further action has been taken to date. ^{28/}

We looked at data for two industries thought to have standard workweeks of less than 40 hours--insurance and printing.

LOMA, the trade association involved in research and education for the life insurance industry, surveyed member insurance companies about hours of work and other industry practices. From the 183 responses, the survey indicated that the average hours worked per week ranged between 35 and 38; only 10 percent of reporting companies had a 40-hour workweek. ^{29/}

The BLS Employment and Earnings Monthly Bulletin, March 1981, shows that the annual average total employment in the printing, publishing, and allied industries in 1980 was 1,272,000 (714,000 of the total were production workers)^{30/}. Contacts with several printing unions provided information on standard contracted work hours for full-time workers. For example, an analysis of contracts for the Printing and Graphic Communications Union (94,000 members) shows that 62 percent of members work a standard

full-time schedule of 37 hours or less. Table 13 shows a breakdown by membership.

As shown in table 14 nearly three-fourths (73 percent) of the locals in the Graphic Arts International Union (77,000 members as of August 31, 1979) have negotiated shorter workweeks (i.e., workweeks of 36 1/3 hours or less).

Extended Holidays and Vacations

Over the years, the United Auto Workers (UAW), General Motors (GM), and Ford have negotiated a growing package of paid time off for most workers in these two firms.^{31/} Approximately 496,000 UAW-represented employees at GM and 150,000 UAW-represented employees at Ford are covered by the agreements. Paid Personal Holidays (PPH) exclusive of paid vacations, excused absences, and regular holidays are the most recent addition to the package of paid time off.

First negotiated in the 1976 contracts, the plan was revised in the 1979 GM and Ford agreements to provide 26 paid personal holidays over a 3-year period--8 days the first year and 9 days each of the last two years.

The United Steelworkers of America (USWA) negotiated an extended vacation benefit in 1962 for its 450,000 members in the steel industry.^{32/} The current 5-year program cycle began January 1, 1979, and runs through December 31, 1983. The work force in each plant is separated into two groups--Senior EV and Junior EV--on the basis of seniority. Each year during the 5-year cycle, one-fifth of the Senior EV group and one-fifth of the Junior EV group rotate into the PPH program. Senior EV employees are eligible for a total of 13 weeks (14 if over 25 years service)

TABLE 13

TOTAL MEMBERSHIP IN PRINTING AND GRAPHIC ARTS COMMUNICATION UNION AND NUMBER OF MEMBERS COVERED BY CONTRACTS SPECIFYING A 30-TO-37-HOUR STANDARD WORKWEEK BY MEMBERSHIP CATEGORY

Membership Category	Total Membership	Members Covered by Contracts of a Full-Time Workweek Schedule From 30 to 37 Hours
Newspapers	16,000	11,000
Commercial Printing	25,000	10,000
Specialty Industries (e.g., business forms, labels, corrugated boxes)	53,000	37,000
TOTAL	94,000	58,000 (62%)

Source: Arnie Anderson, Research Director, Printing and Graphic Arts Communication Union.

TABLE 14

NUMBER OF LOCALS OF THE GRAPHIC ARTS INTERNATIONAL UNION HAVING SHORTER AND STANDARD WORKWEEKS, BY MEMBERSHIP CATEGORIES

Membership Categories	Shorter Workweek (36 1/3 Hours or Less)	Standard Workweek (37 Hours or More)
Lithographers	57	22
Bookbinders	51	24
Gravure	22	3
	130 (73 percent)	49 (27 percent)

Source: Research Department, Graphic Arts International Union, dated July 1, 1981.

paid vacation during the assigned benefit year.

The EV subsumes the regular vacation period, and employees in the Senior EV group get an additional vacation of either 9 or 10 weeks during the benefit year. Junior EV employees are eligible for 4 weeks of the extended vacation benefit in addition to the regular vacation period. Therefore, during the EV benefit year, vacation for employees in the junior group totals 5 to 6 weeks.

USWA also has negotiated EV benefits for its 85,000 members in the aluminum industries, but in a slightly different form. In the aluminum industry, there are no senior and junior groups. Everyone with at least three years of service is given 10 weeks off and paid for 13 weeks, once every five years.

IMPLEMENTATION OF ROTATION LAYOFF AND SHORT TIME-COMPENSATION

Rotation Layoff

Other than selected case studies describing individual company or plant use of rotation layoff, little information on implementation has been compiled. Because rotation layoff enables workers to collect unemployment insurance benefits for weeks of nonwork, it may be possible to gather data on numbers of workers participating from state or local unemployment insurance offices. For example, the Eden branch of the North Carolina Employment Security office uses "temporary or rotation layoff" as one of three unemployment categories under which an individual can receive benefits. Workers in this category retain their

job connection but, due to lack of work, are employed less than the equivalent of three full-time days (or less than 24 hours) during a payroll week and earn less than the eligibility cutoff amount. More than 50 percent of weeks of unemployment claims in the Eden branch are from individuals in this partial unemployment category.^{33/}

Short-time Compensation

The State of California in 1978 passed legislation establishing a statewide Shared Work Unemployment Compensation (SWUC) program which permits employers facing a business downturn to choose a reduction in the hours and wages of all or a part of their work force instead of layoffs. Employer interest began slowly--only 15 plans were submitted and approved during the first six months beginning in July 1978; however, by September 1979, 312 employers had been approved, and by October 1980, 1,293 had been approved, with 35,300 participating employees.

Figures provided by the California Employment Development Department (which administers the program) show that more than half the firms using SWUC between the program's inception and June 1981 were in the manufacturing sector, where unemployment rates have been higher than average (see table 15).^{34/}

The Arizona state legislature passed shared work unemployment legislation in April 1981, and enabling legislation is pending in five other states.^{35/} Thus, it is possible that the use of shared work unemployment compensation as an alternative to layoffs during periods of economic downturn will increase in the future.

TABLE 15

NUMBER AND PERCENT OF CALIFORNIA FIRMS
USING SHARED WORK UNEMPLOYMENT COMPENSATION
IN VARIOUS INDUSTRIES
JULY 1978 - JUNE 1981

Industries	Number of Firms	% of Firms
Agriculture	14	0.9
Mining	2	0.1
Construction	106	7.1
Manufacturing	780	52.4
Transportation and Public Utilities	33	2.2
Wholesale and Retail Trade	190	12.8
Finance, Insurance and Real Estate	134	9.0
Services	220	14.8
Other	10	0.7
	1,489	100.0

Source: Data supplied by Werner Schink, Director of Employment Data, California Employment Development Department, September 1981.

IMPLEMENTATION OF VOLUNTARY TIME-INCOME TRADEOFFS, LEAVES, AND
PHASED RETIREMENT

Implementation of these flexible worklife options is still low, yet a number of trends--an aging work force, the desire among workers for more time away from work, business needs to recruit and retain valued workers, and budget restraints--all presage increased adoption of these arrangements.

A forthcoming book by the Upjohn Institute for Employment Research, Work Sharing Case Studies, reports on programs providing temporary and permanent reductions of hours and flexible worklife options.^{36/} The book includes case studies on 3 voluntary time-income tradeoff programs (2 covering county employees and a third covering state employees); sabbatical arrangements offered by a restaurant chain, a manufacturer, and a bank; 3 social service leave programs (2 manufacturers and a bank); and 6 phased retirement plans sponsored by 4 manufacturers and 2 insurance firms. Additional option programs are cited in the book but not included as case studies. Inquiries to the National Council for Alternative Work Patterns suggest a growing interest in phased retirement arrangements.

Flexible worklife scheduling options enable employers and employees to meet their individual needs. For example, a voluntary time-income tradeoff program was initiated by Santa Clara County, California, to meet tighter budgetary constraints and avoid layoffs expected from Proposition 13. Although the economic problems did not materialize, the program nonetheless became part of the organization's permanent personnel policy

because of employee and union support for it. The New York State Department of Taxation and Finance, a state agency with a work force of 6,000, started a voluntary time-income tradeoff program as a way to increase morale among entry-level Department employees, create more summer jobs for college students, and reduce costs without reducing operating efficiency. The program, referred to as TOTS, or Take Off The Summer, allowed entry-level Department employees to take leaves of absence without pay for 8 to 12 weeks during the summer of 1980. Participation during the 1980 trial summer was restricted to eligible employees in six job titles in entry-level Grade 3 positions (clerk, file clerk, typist, data entry machine operator, mail and supply clerk, and mail and supply helper). Approximately 850 employees were eligible, more than 100 employees applied for the program, and 55 became participants. As a result of the positive evaluation of the program, the Department expanded eligibility for the 1981 summer up through Grade 23, which includes professional and technical employees. An evaluation of the expanded TOTS plan is now underway. ^{37/}

SAFETY

There appears to be little statistical data on the relationship between accident rates and hours of work. The National Safety Council annual publication Work Injury and Illness Rates (based on OSHA recordkeeping definitions), for example, reports on the incidence of injuries by industry, not by hours. ^{38/} Neither the American Industry Advisory Council nor LOMA maintains information

on industry accident rates by hours worked.^{39/}

The American Petroleum Institute study mentioned earlier (see section on 12-hour shift) compared accident frequency and accident severity rates of 8-hour and 12-hour shift workers. Table 18 indicates lower accident frequency and severity rates among 12-hour shift workers than 8-hour shift workers. The API survey also noted that of the 70 locations reporting on their changeover experiences from 8-hour to 12-hour shifts, 5 reported increased accidents, 8 reported decreased accidents, and 57 reported no change.

The Northrup study, also mentioned in the 12-hour shift section, examined accident frequency and violation of OSHA regulations. None of the 50 locations reported increases in accident or health problems as a result of the longer hours.^{40/}

The Hearing Report of the Senate Subcommittee on Labor on the bill to suspend Walsh-Healey ^{41/} contains descriptions of the experience of various companies using compressed workweeks of 4-40 or other schedules. However, the company assessments, which indicate that a compressed workweek schedule had a positive effect on accident rates, should not be construed as statistically representative. Nonetheless, the findings of these companies are interesting to this project.

The Blue Bird Body Corporation, Georgia, has had its work force of 1,921 employees on the four 10-hour day version of compressed workweek for 10 years. During the five years preceding institution of the 4-day week, the number of days per year lost in employee working time due to injuries on the job at one plant averaged 798.2 per year. Since adoption of the

TABLE 16

COMPARISON BETWEEN WORKERS ON 8-HOUR SHIFTS AND 12-HOUR SHIFTS
IN THE REFINING AND PETROCHEMICAL INDUSTRY

Variable	8-Hour Shifts	12-Hour Shifts
Number of Employees	58,113	8,266
Average Number of Hours Worked in the Workweek	40.6	40.8
Average Number of Hours Per Year of Short-Term Absences	40.4	36.5
Average Number of Hours Per Year Extended Absences	84.8	67.2
Accident Frequency Rate <u>1/</u>	9.6	7.2
Accident Severity Rate <u>2/</u>	138.4	69.4
Grievance Frequency Rate	8.4	2.0
Percentage of Spares	6.8	5.3
Percentage of Overtime Worked	7.9	9.2

Source: "Survey Comparing Experience of 12 Hours Per Day
Schedule and 8 Hours Per Day Schedule," Hydrocarbon
Processing, April 1980, PP. 249-256.

1/ Frequency rate: number of disabling injuries multiplied
by 1 million and divided by the total number of hours
worked per year.

2/ Severity rate: total days charged as lost due to industrial
accidents multiplied by 1 million and divided by the total
number of hours worked per year.

compressed workweek, the figure has dropped to an average of 250.5 days per year, even though the number of employees has doubled during the time.

The company representative of the C.A. Norgren Company, Colorado, which has three compressed workweek versions, did not believe that accidents or safety were problems attributable to a longer work day.

It might be interesting to look at safety records of companies that discontinued 4-40 compressed workweek schedules and 12-hour shifts; it might also be useful to question organizations now operating under compressed workweeks about accident frequency and severity.

In California's SWUC program, participating firms decide on the day off for workers. One firm reported that it chose Monday as the day off because accident rates and absenteeism were highest at the company on Mondays. The Employment Development Department which administers the SWUC program does not collect data on accident rates (that is a function of the state OSHA office), so it is not clear whether data could be matched for periods of SWUC participation and nonparticipation to assess the impact on accident rates.

The literature on flexitime application, while fairly extensive, does not deal with safety records.

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FOOTNOTES

1/ The new publication of the Work in America Institute, New Work Schedules For a Changing Society, excludes the rolling 4/10 schedule from its definition of compressed workweek because it "shortens the workweek and reduces income correspondingly," p 26.

2/ Stanley D. Nollen and Virginia H. Martin, Alternative Work Schedules, Parts 1, 2, and 3: Flexitime, Permanent Part-Time Employment and Compressed Workweeks (New York: AMACOM, a Division of American Management Associations, 1978).

3/ Lois F. Copperman, "Alternative Work Policies in Private Firms," The Personnel Administrator, October 1979.

4/ Harriet Gorlin, "Personnel Practices II: Hours of Work, Pay Practices, Relocation," Information Bulletin No. 92 (New York: The Conference Board, 1981).

5/ Ray Kirk, Project Director, Alternative Work Schedule Experiment, U.S. Office of Personnel Management, Washington, D.C., raw data and preliminary findings for the project evaluation being prepared for the U.S. Congress, September 1981.

6/ Marion C. Long and Susan W. Post, State Alternative Work Schedule Manual (Washington, D.C.: National Council for Alternative Work Patterns and the National Governor's Association, 1981), pp iii-xii.

7/ Stanley D. Nollen, "What is Happening to Flexitime, Flexitour, Gliding Time, the Variable Day? And Permanent Part-Time Employment? And the Four-Day Week?" Across the Board, April 1980, p 10.

8/ Families at Work: Strengths and Strains, Series, The American Families, no. 4 (General Mills), 1981.

9/ Work in America Institute, New Work Schedules for a Changing Society (New York: Work in America Institute, 1981), p 4.

10/ Telephone interview and personal meeting with Pat Flora, Director, Personnel, Hecon Corporation, New Jersey and Bernard Keppler, President, General Terminal Systems, New York, respectively, September 1981.

11/ Nollen, p 18.

12/ Robert M. Gasperow, Executive Director, Construction Labor Research Council, Washington, D.C., correspondence, September 1981.

13/ U.S. Congress, Senate, Committee on Labor and Human Resources, Report of the Senate Subcommittee on Labor, S. 398, 97th Congress, 1st sess., March 10, 1981.

- 14/ Kirk
- 15/ Long and Post, pp iii - xii.
- 16/ Work in America Institute, p 4.
- 17/ U.S. Congress, Senate, Report on S. 398.
- 18/ Kirk
- 19/ "Newsletter," National Council for Alternative Work Patterns, Energy and Transportation Columns, Fall 1979, Winter 1980, and Spring 1980.
- 20/ Long and Post, p ix.
- 21/ L. H. Campbell, "Survey Comparing Experience of 12 Hours Per Day Schedule and 8 Hours Per Day Schedule," Hydrocarbon Processing, April 1980. (From the Final Report on the Survey, prepared by the Ad Hoc Task Group on Motivation of Shift Workers, of the Committee on Training and Development, Refining Department, American Petroleum Institute).
- 22/ Herbert R. Northrup, James D. Wilson, and Karen M. Rose, "The Twelve-Hour Shift in the Petroleum and Chemical Industries," Industrial and Labor Relations Review, April 1979.
- 23/ Information compiled from William V. Deutermann and Scott C. Brown, "Voluntary Part-Time Workers: A Growing Part of The Labor Force," Monthly Labor Review, June 1978, pp 3-10 and Janice Neipert Hedges and Daniel E. Taylor, "Recent Trends in Worktime Hours Edge Downward," Monthly Labor Review, March 1980, pp 3-9.
- 24/ Gail S. Rosenberg, "When Less is More," Washington Post, February 13, 1980.
- 25/ Long and Post, p iv.
- 26/ Gretl Meier, Job-Sharing: A New Pattern for Quality of Work and Life (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, February 1980).
- 27/ Hedges and Taylor, p 4.
- 28/ U.S. Congress, House of Representatives, Committee on Education and Labor, Revisions of the Overtime Compensation Requirements of the Fair Labor Standards Act of 1938, Hearings Before the Subcommittee on Labor Standards, 96th Congress, 1st sess., October 23, 24, and 25, 1979.

29/ Telephone interview, September 1981. Kay Moore, Human Resources Department, Research, LOMA, Atlanta, Georgia.

30/ U.S. Bureau of Labor Statistics, U.S. Department of Labor, Employment and Earnings, Monthly Bulletin, March 1981.

31/ Maureen E. McCarthy, Gail S. Rosenberg, and Gary Lefkowitz, Work Sharing Case Studies (Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, Forthcoming, November 1981), case study on extended holidays (General Motors, Ford Motor Company, United Auto Workers).

32/ Ibid., case study on extended vacation (United Steelworkers of America).

33/ Ibid., case study on rotation layoff (Fieldcrest Mills).

34/ Werner Schink, Director, Employment Data and Research Division, Employment Development Department, Sacramento, California, raw data collected for Shared Work Unemployment Compensation program evaluation, September 1981.

35/ McCarthy, Rosenberg, and Lefkowitz.

36/ Ibid.

37/ Ibid. case studies on voluntary time-income tradeoff at Santa Clara County and New York State Department of Finance and Taxation.

38/ National Safety Council, Work Injury and Illness Rates, 1980 Edition.

39/ Telephone interviews with Moore, LOMA, and Bart Henricson, American Industry Advisory Research Council, Washington, D.C., September 1981.

40/ Northrup, Wilson and Rose.

41/ U.S. Congress, Senate, Report on S. 398.

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Terms & Conditions -- Contract Detail

CITY WILMINGTON, DELAWARE
CRAFT BRICKLAYERS
LOCAL 1
EXPIRES 01/04/30
CODE DEU112

A HOURS_OF_WORK_____

1	DAILY HRS.	8.0
2	WEEKLY HRS.	40.0
3	START TIME	3:30
4	END TIME	4:25
5	VARY TIME (WHO)	JOINT
6	LUNCH START	
7	LUNCH END	
8	GUARANTEED HRS.	
9	4-10'S OPTION	

B OVERTIME TIMES BASE RATE)

1A	MON-FRI	2.0
1B		
2	SATURDAY	2.0
3	SUNDAY	2.0
4	HOLIDAY	2.0
5A	SAT. MAKE-UP	

SUB RESTRICTIONS

C	REPORTING PAY (HRS.)	
01	SHOW-UP PAY (HRS.)	2.0
2	WEATHER PER., ETC.	Y

E HOLIDAYS-----

1	TOTAL	6
	PAID	
2	NEW YEAR'S	Y
3	LINCOLN B'DAY	
4	WASHINGTON B'DAY	
5	GOOD FRI.	
6	MEMORIAL DAY	Y
7	JULY 4TH	Y
8	LABOR DAY	Y
9	COLUMBUS DAY	
10	ELECTION DAY	
11	VETERANS DAY	
12	THANKSGIVING DAY	Y
13	THANKSGIVING +1	
14	XMAS EVE	
15	CHRISTMAS	Y
16	OTHER (#)	

Y = YES, EXISTS
U = UNCLEAR OR UNSPECIFIC
X = EXCEPTIONS
W = WORKED
P = PAID

CONSTRUCTION LABOR RESEARCH COUNCIL

F EDREMAN BAILLS

1 MIN CREW REQUIRE FORE
2 # JOURNEY TO EA. FORE
3 NON-WORKING
4 GUARANTEED HOURS

6 OTHER SUPERVISION_____

1A NAME
1B COMPARED TO
1C NUMBER
2A NAME
2B COMPARED TO
2C NUMBER

3 ADDITIONAL CATEGORIES

H SUPERVISORY PAY PREMIUMS
H1 FOREMAN DUFF .25
PER 11k

```

2A OTHER SUPV NAME:
2B DIFF
   PER
3A OTHER SUPV NAME:
3B DIFF
   PER

```

I TRAVEL-PAY-----

1	BASE POINT	BUSLINE END
2	TYPE OF PAYMNT	COST
2A	MILES TO/FROM	/UP
	AMOUNT	.00

2B MILES TO/FROM
AMOUNT

2C MILES TO/FROM
AMOUNT

20 MILES TO/FROM
AMOUNT
3 HIGHER MILES/AMT.
4 FIRST & LAST DAY ONLY
5 OTHER PAYMENTS

J SUBSISTENCE PAY _____

1A AMOUNT	CO. ST
1B SITUATION FOR PAYMENT	OVERN
2A PARKING	

2B SITUATION FOR PAYMENT

K APPENDICES

1 MIN. CREW PERMITTING USE
2 # JOURYMN TO EA. APPREN.
3 RESTRICTIONS ON USE SUPER

SUB=JOURNEYMAN-----

```

1 MIN. CREW PERMITTING USE
2 # JOUROYMN TO EA. SUB.
3 MAX. % USE
4 RESTRICTIONS ON USE

```

M BRIDGE_FUND_CALCULATION

1 PENSION CONTRIB.
2 HEW CONTRIB.
N DUES CHECK-OFF AMT.

J PAC CHECK-OFF AMT.

P HIRING HALL-----
1 EXCLUSIVE
2 SOURCE OF FOREMAN
3 RIGHT TO REQ. BY NAME
4 RIGHT TO REJ. APPLICANT
5 HRS. BEFORE DIRECT HIRE

2. 50+EI-FA-VLSI

1 TWO SHIFTS		
1A	1ST HRS WKED	0
	PAID	0
1B	2ND HRS WKED	0
	PAID	0
2 THREE SHIFTS		
2A	1ST HRS WKED	3.00
	PAID	3.00
2B	2ND HRS WKED	7.00
	PAID	3.00
2C	3RD HRS WKED	7.00
	PAID	3.00
3 SIN. DAYS OF SHIFT		

235MIDG-PAY-----

```

1 TYPE OF WORK
2 HEIGHT
3 DEPTH
4 EQUIP.
5 MATERIALS
5 MINUTES PAID TO DO WORKING
1 LUNCH
2 COFFEE
3 CLEAN-UP
4 PICK-UP
5 REPAIR/DIRTY WORK
6 JETER (TIME &
  NAME)

```

T	OLDER WORKER RATIO	4
U	RESTRICTIONS-----	

```

1 CREW SIZE
2 TOOLS
3 OUTPUT
4 DAILY EQUIP. CHANGE
5 DAILY JOB SITE CHANGES
6 ON SITE FABRICATION
7 LMT. ON OFF SITE FAB.
8 OTHER

```

V DISPUTE-RESOLUTION-----

1	NO STRIKE/LOCKOUT	Y
2	GRIEVENCE PROC. STEPS	5
3	ARBITRATION AGENCY	AAA
4	JURIS. DISPUTE AGENCY	NLRB

OTHER CONDITIONS-----

1 SUB-CONTRACTING
2 MGT. RIGHTS CLAUSE
3 MOST FAVORED NATION
4 RATES/CUND. FOR TYPES WRK
5 MAINTAINENCE PRGV.
6 RESIDENTIAL PRDV.
7 LABOR-MGT. COMM.

A one page summary of terms and conditions is available for each contract. In most cases specific information is recorded on the form, but, for some situations, the contract is either too vague or complex for interpretation and these cases are also recorded. Contracts are identified by city, craft and local number. Contracts are building construction agreements unless otherwise identified.

APPENDIX A

Terms & Conditions -- City Summary	ASBESTOS WORKERS	BRICKLAYERS	CEMENT MASON	ELECTRICIANS	IRON/STEEL WORKERS	LABORERS (BLDG.)	LATHERS
WILMINGTON, DELAWARE							
1. DAILY HRS.	8.0	8.0	8.0	8.0	8.0	8.0	8.0
2. WEEKLY HRS.	40.0	40.0	40.0	40.0	40.0	40.0	40.0
3. START TIME	8:00	8:00	8:00	8:00	8:00	8:00	8:00
4. END TIME	4:30	4:25	4:30	4:30	5:00	4:30	4:30
5. VARY TIME (WHOP)	JOINT	JOINT	JOINT		JOINT	JOINT	JOINT
6. LUNCH START	12:00						
7. LUNCH END	12:30						
8. GUARANTEED HRS.							
9. 4-10'S OPTION							
10. OVERTIME (TIMES BASE RATE)							
11. MON-FRI	2.0	2.0	2.0	2.0	2.0	2.0	1.5
12. SATURDAY	2.0	2.0	2.0	2.0	2.0	2.0	1.5
13. SUNDAY	2.0	2.0	2.0	2.0	2.0	2.0	2.0
14. HOLIDAY	2.0x	2.0	2.0	2.0	2.0	2.0	2.0
15. SAT. MAKE-UP							
16. RESTRICTIONS							
17. REPORTING PAY (HRS.)	2.0						
18. SHOW-UP PAY (HRS.)	2.0	2.0		2.0	2.0		
19. WEATHER PER., ETC.		Y					
20. HOLIDAYS							
21. TOTAL PAID	6	6	6	6	6	6	6
22. NEW YEAR'S	Y	Y	Y	Y	Y	Y	Y
23. LINCOLN B'DAY							
24. WASHINGTON B'DAY							
25. GOOD FRI.							
26. MEMORIAL DAY	Y	Y	Y	Y	Y	Y	Y
27. JULY 4TH	Y	Y	Y	Y	Y	Y	Y
28. LABOR DAY	Y	Y	Y	Y	Y	Y	Y
29. COLUMBUS DAY							
30. ELECTION DAY							
31. VETERANS DAY							
32. THANKSGIVING DAY	Y	Y	Y	Y	Y	Y	Y
33. THANKSGIVING +1							
34. XMAS EVE							
35. CHRISTMAS	Y	Y	Y	Y	Y	Y	Y
36. OTHER (N)							

Y = YES, EXISTS
 J = UNCLEAR OR UNSPECIFIC
 X = EXCEPTIONS
 W = WORKED
 P = PAID

For each contract in a city, the terms and conditions are compared between crafts. (There are additional pages for additional terms and conditions and crafts).

Terms & Conditions -- Craft Summary
CONSTRUCTION LABOR RESEARCH COUNCIL

	BRICKLAYERS	BIRMINGHAM	MOBILE	SHEFFIELD	BAKERSFIELD	LOS ANGELES	DENVER	WILMINGTON
A HOURS OF WORK								
1 DAILY HRS.		8.0	8.0	9.0	9.0	8.0	8.0	8.0
2 WEEKLY HRS.			40.0	40.0	40.0	40.0	40.0	40.0
3 START TIME		8:00	7:00	7:00	8:00	8:00	7:00X	8:00
4 END TIME		4:30	5:00	5:00	4:30	4:30	3:30X	4:25
5 VARY TIME (WHO)					JOINT	JOINT	JOINT	JOINT
6 LUNCH START		12:00						
7 LUNCH END		12:30						
8 GUARANTEED HRS.								
9 4-10'S OPTION			Y					
B OVERTIME (TIMES BASE RATE)								
1A MON-FRI		1.5 UP 2HR	1.5	1.5 UP 2HR	2.0	2.0	1.5	2.0
1B		2.0 AFT 2H		2.0 AFT 2H				
2 SATURDAY		2.0	1.5	2.0X	2.0	2.0	1.5	2.0
3 SUNDAY		2.0	2.0	2.0	2.0	2.0	2.0	2.0
4 HOLIDAY		2.0	2.0	2.0	2.0	2.0	2.0	2.0
5A SAT. MAKE-UP							Y	
5B RESTRICTIONS							NOV-APR	
C REPORTING PAY (HRS.)								
01 SHOW-UP PAY (HRS.)		2.0	2.0		2.0	2.0	2.0	2.0
2 WEATHER PER., ETC.			Y			Y	Y	Y
E HOLIDAYS								
1 TOTAL PAID		6	7	6	8	9	6	6
2 NEW YEAR'S		Y	Y	Y	Y	Y	Y	Y
3 LINCOLN B'DAY								
4 WASHINGTON B'DAY								
5 GOOD FRI.								
6 MEMORIAL DAY					Y	Y	Y	Y
7 JULY 4TH		Y	Y	Y	Y	Y	Y	Y
8 LABOR DAY		Y	Y	Y	Y	Y	Y	Y
9 COLUMBUS DAY								
10 ELECTION DAY								
11 VETERANS DAY					Y	Y		
12 THANKSGIVING DAY		Y	Y	Y	Y	Y	Y	Y
13 THANKSGIVING +1		Y	Y	Y	Y	Y		
14 XMAS EVE			Y					
15 CHRISTMAS		Y	Y	Y	Y	Y	Y	Y
16 OTHER (?)					U			

Y = YES, EXISTS

U = UNCLEAR OR UNSPECIFIC

X = EXCEPTIONS

W = WORKED

P = PAID

For each craft, the terms and conditions are compared between cities within a state, region or the U.S. (There are additional pages for additional terms and conditions and city).