

Chapter 3

Worker Displacement

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Table 3-1.—Employment Status of Displaced Workers by Age, Sex, and Ethnic Origin, January 1984

| Age, sex, race | Total (in thousands) ^a | Percentage employed | Percentage unemployed | Percentage not in labor force ^b |
|-------------------------------|--------------------------------------|------------------------|--------------------------|---|
| Total, 20 years and older . . | 5,091 | 60.1 | 25.5 | 14.4 |
| 20-24 years | 342 | 70.4 | 20.2 | 9.4 |
| 25-54 years | 3,808 | 64.9 | 25.4 | 9.6 |
| 55-64 years | 748 | 40.8 | 31.8 | 27.4 |
| 65 years and older. | 191 | 20.8 | 12.1 | 67.1 |
| Men: | | | | |
| Total, 20 years and older | 3,328 | 63.6 | 27.1 | 9.2 |
| 20-24 years | 204 | 72.2 | 21.7 | 6.1 |
| 25-54 years | 2,570 | 68.2 | 26.8 | 5.0 |
| 55-64 years | 461 | 43.6 | 34.1 | 22.3 |
| 65 years and older. | 92 | 16.8 | 12.9 | 70.3 |
| Women: | | | | |
| Total, 20 years and older | 1,763 | 53.4 | 22.5 | 24.2 |
| 20-24 years | 138 | 67.8 | 18.0 | 14.2 |
| 25-54 years | 1,239 | 58.0 | 22.6 | 19.4 |
| 55-64 years | 287 | 36.3 | 28.0 | 35.7 |
| 65 years and older. | 99 | 24.6 | 11.3 | 64.1 |
| White: | | | | |
| Total, 20 years and older | 4,397 | 62.6 | 23.4 | 13.9 |
| Men | 2,913 | 66.1 | 25.1 | 8.8 |
| Women | 1,484 | 55.8 | 20.2 | 24.1 |
| Black: | | | | |
| Total, 20 years and older | 602 | 41.8 | 41.0 | 17.1 |
| Men | 358 | 43.9 | 44.7 | 11.4 |
| Women | 244 | 38.8 | 35.6 | 25.6 |
| Hispanic origin: | | | | |
| Total, 20 years and older | 282 | 52.5 | 33.7 | 14.1 |
| Men | 189 | 55.2 | 35.5 | 9.3 |
| Women | 93 | 46.3 | 30.0 | 23.6 |

^aData refer to persons with tenure of 3 or more years in one job, who lost or left that job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

^bWorkers may retire from the labor force because of voluntary choice, retirement, or discouragement.

Note: Breakdown data on the ethnic groups will not sum to the corresponding totals because data for "other races" are not presented and Hispanics may be included in both white and black populations. Thus, Hispanics may be counted more than once in the table.

SOURCE: Paul O. Flaim and Ellen Sehgal, "Displaced Workers of 1979-83: How Well Have They Fared?" *Monthly Labor Review*, June 1985.

1979 to 1983, since some of the job losses—especially those due to slack work—were probably cyclical and temporary. Moreover, some workers displaced from their jobs found new ones quickly, with pay as good or better as on the old job.

For many of the displaced workers, however, the consequences of job loss were painful and long lasting. Of the 5.1 million termed displaced by BLS, the 500,000 who had been unemployed for half a year or more in January 1984 were clearly having difficulty adjusting to the job loss. It is uncertain how many of the 730,000 workers who dropped out of the labor force did so by choice, and how many stopped looking for work out of discouragement or retired earlier than they wished. Of

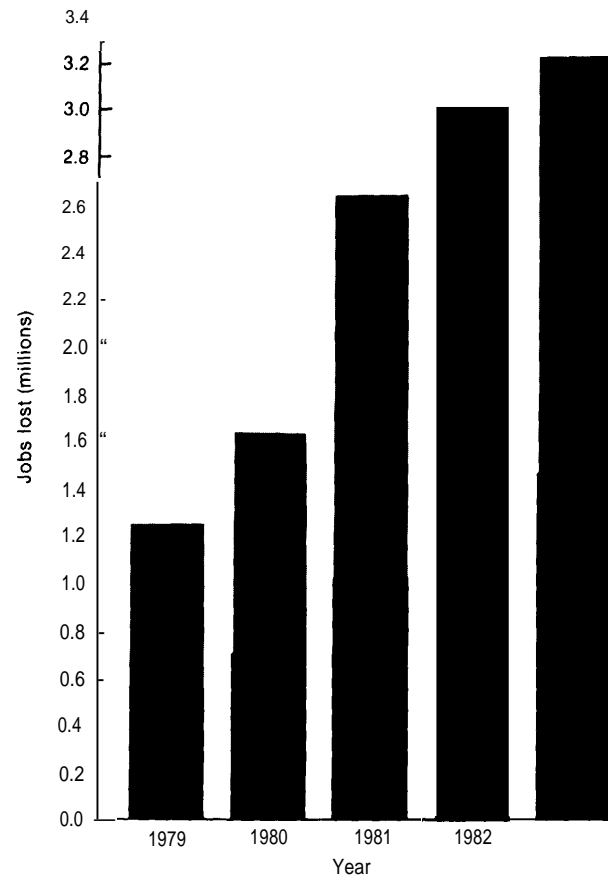
approximately 2 million former full-time wage and salary earners who reported their pay on the jobs they lost and on new jobs they held in January 1984, 941,000 (46 percent) had taken pay cuts—in the case of 621,000 of these workers, large cuts of 20 percent or more. In addition, many former full-time workers (357,000 out of 2.8 million reporting, or 13 percent) took part-time jobs and thus had a drop in their earnings. The figures are not additive, because they are based on different numbers of respondents, but it appears that at least half the workers who were reemployed earned less income on the new job than the old—and this takes no account of the effects of inflation.

Another analysis of the survey results, done for the Bureau of International Labor Affairs

of the Department of Labor, excluded displaced workers over 61 years old but included all others, regardless of tenure on the old job. preliminary findings from this analysis were that 29 percent of the blue-collar workers displaced over the 5 years were unemployed as of January 1984 and 10 percent were out of the labor force; for white-collar and service workers, 20 percent were unemployed and 12 percent were out of the labor force. The average drop in earnings of those reemployed, adjusted for inflation, was 15 percent for blue-collar workers and 12 percent for white-collar and service workers.⁶

Another way at looking at the dimensions of displacement is to consider the flow of displaced workers over time. As figure 3-1 indicates, the number of displaced workers rose every year from 1979 through 1983. Of 11.5 million workers losing jobs over the 5 years, 1.2 million lost their jobs in 1979, and 3.3 million lost jobs in 1983. possibly, the losses in the earlier years are understated; respondents tend to forget events that occurred in the more distant past, so that workers surveyed in 1984 may have failed to recall some job losses that happened in the earlier years.⁷In addition, some of the losses in the later years were no doubt due to the severe recession that began to lift only in 1983, especially late that year. It is not always possible, however, to distinguish cleanly between cyclical and structural loss of jobs, particularly when two recessions follow back to back, as in 1980 and from mid-1981 through part of 1983. The effects on workers of prolonged unemployment are much the same, whether analysts eventually conclude

Figure 3-1.- Number of Workers Displaced, 1979-83



Based on 11.5 million displaced workers

Based on 5.1 million displaced workers who lost jobs they had held for 3 years

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, unpublished data from January 1984 survey of displaced workers.

that the unemployment was cyclical or structural. The worker in any case has to find another job. a

According to the BLS survey, displacement hit **some** groups of workers, some industries, and some regions harder than others. Younger workers fared better than older ones in finding new jobs, men did better than women, whites did better than Hispanics and much better than blacks (table 3-1). Although unemployment

⁶Information provided by U.S. Department of Labor, Bureau of International Labor Affairs, from a preliminary draft report, Michael Podgursky and Paul Swain, "Labor Market Adjustment and Job Displacement: Evidence From the January, 1984 Displaced Worker Survey," August 1985. This study analyzed results of the BLS survey for all workers aged 20 to 61 who were displaced from 1979 to 1983 due to plant closings, abolition of a position or shift, or slack work, regardless of tenure on the job. The analysis covered 9.5 million workers, considering separately 5.8 million blue-collar workers and 3.8 million white-collar and service workers.

⁷Paul Flaim, Chief, Division of Data Development and Users' Services, Bureau of Labor Statistics, letter to Julie F. Gorte, Project Director, Office of Technology Assessment, Aug. 30, 1985.

⁸For analysis and discussion of this point, see Lynn E. Browne, "Structural Change and Dislocated Workers," *New England Economic Review*, January/February 1985.

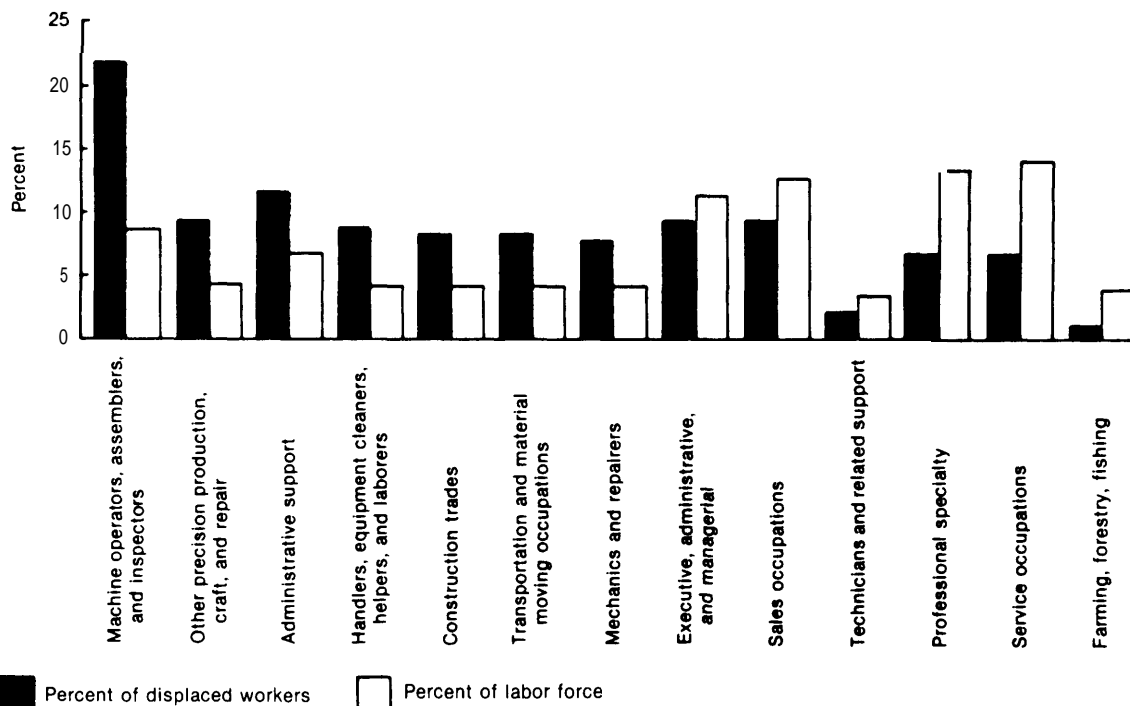
rates for women were lower than for men (23 v. 27 percent), reemployment of women was much lower (53 v. 64 percent); many women, nearly one-quarter of those displaced, dropped out of the labor force.

The more skilled or professional a worker, the less likely he or she is to lose a job, and the more likely to find a new job after displacement. Production workers—skilled, semiskilled, and unskilled—lost jobs in far greater proportion to their numbers than managers, professionals, and technicians (figure 3-2). Moreover, 75 percent of managers and professionals who lost jobs landed on their feet, with only 17 percent still unemployed in January 1984 (table 3-2). Two-thirds of technicians and salesworkers found jobs, as did more than 60 percent of skilled blue-collar workers. Among the 1.8 million less skilled workers, including machine operators, assemblers, and laborers, only 55 percent had jobs, and 32 percent were un-

employed. Among clerical workers, who are largely female, 54 percent were employed, 26 percent were unemployed, and 20 percent were out of the labor force. Service workers, also predominantly female, showed a similar employment pattern.

Manufacturing workers experienced job losses far out of proportion to their numbers—2.5 million, nearly half of all the workers displaced, lost manufacturing jobs (table 3-3). This contrasts with the 20 percent share of manufacturing jobs in total private nonagricultural employment. Within manufacturing, the job losses were skewed to durable goods, with the biggest losses occurring in nonelectrical machinery (396,000), automobiles (224,000), and primary metals (219,000), mostly steel. The worst reemployment record was in primary metals; only 46 percent in this group had found jobs by January 1984, while 39 percent remained unemployed. In the nondurable goods

Figure 3-2.—Percentage of Displaced Workers and Percentage of Labor Force, by Occupation



SOURCE: U S Department of Labor, BLS, *Employment and Earnings*, January 1985, and Paul O Flaim and Ellen Sehgal, "Displaced Workers of 197983: How Well Have They Fared?" *Monthly Labor Review*, June 1985, p. 7.

Table 3-2.-Employment Status of Displaced Workers by Occupation of Lost Job, January 1984

| Occupation of lost job | Total (in thousands) ^a | Percentage employed | Percentage unemployed | Percentage not in labor force ^b |
|---|--------------------------------------|------------------------|--------------------------|---|
| Total, 20 years and older | 5,091 | 60.1 | 25.5 | 14.4 |
| Managerial and professional | 703 | 74.7 | 16.6 | 8.8 |
| Technical, sales, and administrative support | 1,162 | 60.6 | 21.1 | 18.3 |
| Technicians and related support. | 122 | 67.9 | 25.3 | 6.8 |
| Sales occupations | 468 | 66.7 | 14.6 | 18.7 |
| Administrative support, including clerical | 572 | 54.1 | 25.5 | 20.5 |
| Precision production, craft, and repair. | 1,042 | 61.6 | 26.1 | 12.3 |
| Mechanics and repairers | 261 | 61.3 | 29.3 | 9.4 |
| Construction trades. | 315 | 63.2 | 23.8 | 13.0 |
| Other | 467 | 60.8 | 25.8 | 13.4 |
| Operators, fabricators, and laborers. | 1,823 | 54.6 | 31.6 | 13.7 |
| Machine operators, assemblers, and inspectors | 1,144 | 56.0 | 27.5 | 15.6 |
| Transportation and material moving. | 324 | 63.8 | 28.7 | 7.5 |
| Handlers, equipment cleaners, helpers, and laborers | 355 | 41.8 | 47.6 | 10.6 |
| Service occupations | 275 | 51.0 | 24.1 | 24.9 |
| Farming, forestry, fishing | 68 | b | b | b |

^aData refer to persons with tenure of 3 or more years in one job, who lost or left that job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

^bData not shown where base is less than 75,000.

SOURCE: Paul O. Flaim and Ellen Sehgal, "Displaced Workers of 1979-83: How Well Have They Fared?" *Monthly Labor Review*, June 1985.

sector, 212,000 textile and apparel workers lost their jobs, as did 175,000 workers in food and kindred products. In all manufacturing, about 59 percent of the displaced workers were re-employed, while 27 percent remained out of work.

The hardest hit geographical area, both in absolute numbers of displaced workers and in their relation to the size of the area labor force, was the East North Central region—the States of Ohio, Indiana, Michigan, Illinois, and Wisconsin (figures 3-3 and 3-4 and table 3-4). In this region, 1.2 million workers were displaced, and only half were reemployed by January 1984; 189,000 (16 percent of the total number displaced in the region and 47 percent of those unemployed) had been out of work for more than half a year. In the Middle Atlantic region

—New York, New Jersey, and Pennsylvania—nearly 800,000 workers were laid off, but the proportion of the work force affected was smaller, and the reemployment record better. A less publicized area with more than its share of displaced workers was the East South Central region—Alabama, Mississippi, Kentucky, and Tennessee. The number of workers displaced here (378,000) was smaller than in the other two areas, but unemployment was persistent; 15 percent of the displaced workers (over half of those still unemployed in 1984) had been jobless for 27 weeks or more. This was nearly as high a rate of persistent unemployment as in the East North Central region.

Altogether, the survey indicates that displacement was a substantial and enduring problem from 1979 to 1984.

PERSONAL COSTS OF DISPLACEMENT

Unemployment

Prolonged unemployment is the most obvious of the personal costs borne by displaced workers. These people typically remain out of work much longer than other unemployed workers—long enough for many to run out of unemploy-

ment insurance and to suffer serious losses in family income.

Of the 5.1 million adult workers displaced between 1979 and 1984, 43 percent (2.2 million) were without work for a total of at least 27 weeks during the 5 years (the weeks without

Table 3.3.—Employment Status of Displaced Workers by Industry of Lost Job, January 1984

| Industry of lost job | Total (in thousands) ^a | Percentage employed | Percentage unemployed | Percentage not in labor force ^b |
|---|--------------------------------------|------------------------|--------------------------|---|
| Total, 20 years and older | 5,091 | 60.1 | 25.5 | 14.4 |
| Nonagricultural private wage and salary workers | 4,700 | 59.8 | 25.8 | 14.4 |
| Mining | 150 | 60.4 | 31.0 | 8.6 |
| Construction | 401 | 55.0 | 30.7 | 14.3 |
| Manufacturing | 2,483 | 58.5 | 27.4 | 14.1 |
| Durable goods | 1,675 | 58.2 | 28.9 | 12.9 |
| Lumber and wood products | 81 | 67.9 | 19.1 | 13.0 |
| Furniture and fixtures | 65 | | | |
| Stone, clay, and glass | 75 | 47.5 | 30.5 | 22.0 |
| Primary metal industries | 219 | 45.7 | 38.7 | 15.6 |
| Fabricated metal products | 173 | 62.0 | 32.2 | 5.8 |
| Machinery, except electrical | 396 | 62.3 | 27.4 | 10.3 |
| Electrical machinery | 195 | 48.2 | 34.5 | 17.3 |
| Transportation equipment | 354 | 62.6 | 26.0 | 11.4 |
| Automobiles | 224 | 62.9 | 24.0 | 13.1 |
| Other transportation equipment | 130 | 62.1 | 29.4 | 8.5 |
| Other durable goods | 116 | | | |
| Nondurable goods | 808 | 59.1 | 24.2 | 16.7 |
| Food and kindred products | 175 | 52.5 | 32.6 | 15.0 |
| Textile mill products | 80 | 59.8 | 26.2 | 13.9 |
| Apparel and other finished textile | 132 | 63.0 | 14.2 | 22.8 |
| Paper and allied products | 60 | | | |
| Printing and publishing | 103 | 58.0 | 22.9 | 19.1 |
| Chemical and allied products | 110 | 64.0 | 27.3 | 8.7 |
| Rubber and miscellaneous plastics | 100 | 62.8 | 18.3 | 18.8 |
| Other | 49 | | | |
| Transportation and public utilities | 336 | 57.9 | 26.8 | 15.3 |
| Wholesale and retail trade | 732 | 61.4 | 21.6 | 16.9 |
| Wholesale trade | 234 | 69.6 | 22.0 | 8.4 |
| Retail trade | 498 | 57.6 | 21.5 | 20.9 |
| Finance, insurance, and real estate | 93 | 78.5 | 12.4 | 9.1 |
| Services | 506 | 65.0 | 20.5 | 14.5 |
| Agricultural wage and salary workers | 100 | 69.9 | 22.9 | 7.2 |
| Government workers | 248 | 63.3 | 18.7 | 18.0 |

^aData refer to persons with tenure of 3 or more years in one job, who lost or left that job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

^bData not shown where base is less than 75,000.

SOURCE: Paul O'Flair and Ellen Sehgal, "Displaced Workers of 1979-83: How Well Have They Fared?" *Monthly Labor Review*, June 1985.

work were not necessarily continuous). Nearly one-quarter of the workers (1.2 million) were without work for a year or more, and the median weeks without work was 24.1 weeks (table 3-5).⁹ Of the 3.5 million displaced work-

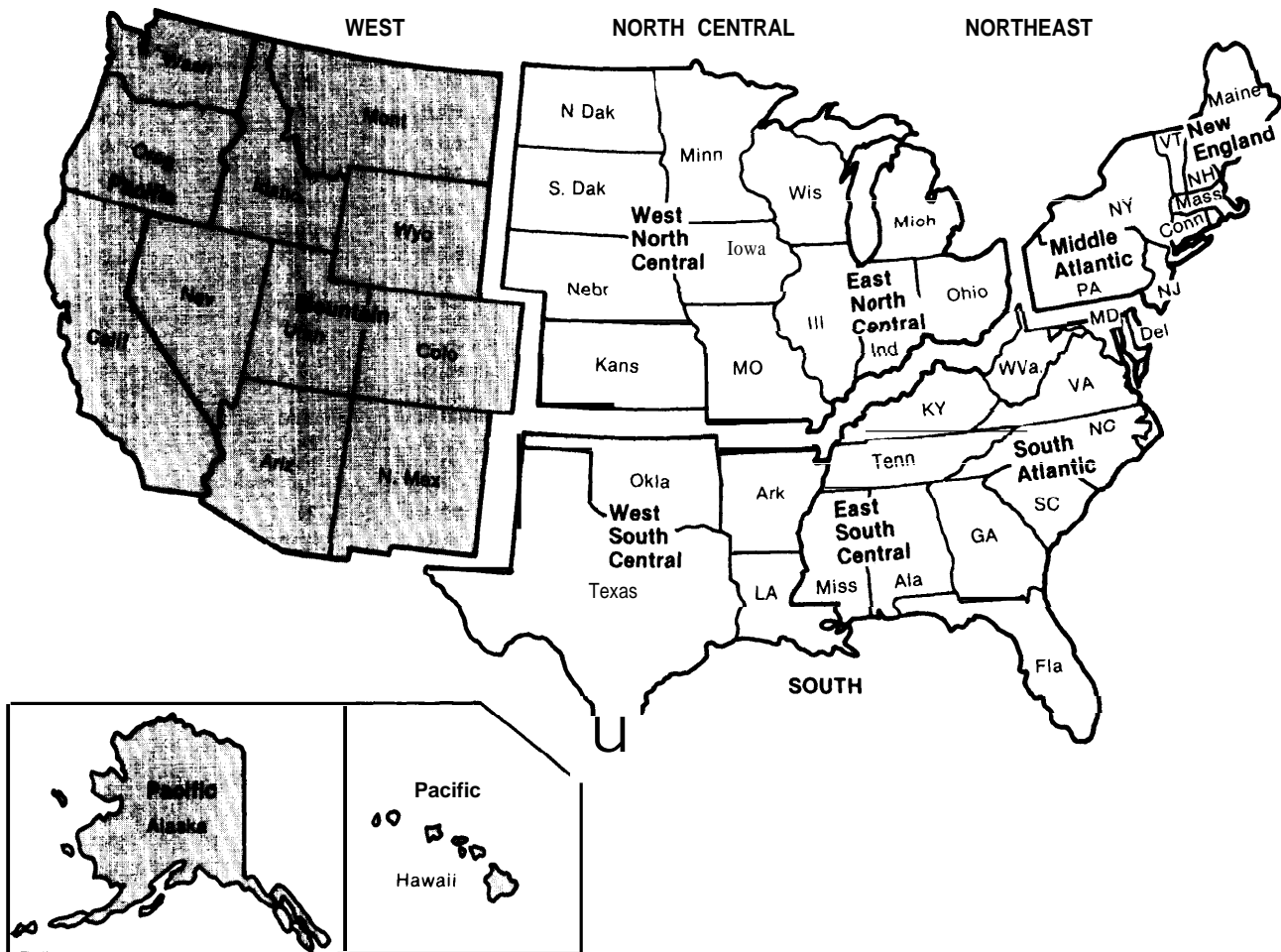
ers who received unemployment insurance, half exhausted their benefits.

A score of studies of individual plant closings done over the past quarter of a century supplement the information gathered in the BLS survey of displaced workers. Wilcock and Franke followed more than 2,600 workers in five cities after the shutdowns of four meat-packing plants and a laundry equipment manufacturing plant in 1959 and 1960.¹⁰ A year

⁹The numbers in tables 3-4 and 3-5 are not comparable. Table 3-4 refers to displaced workers who were unemployed in January 1984, and had been continuously unemployed for 5 weeks or less, or 27 weeks or more, at that time. Table 3-5 refers to the total weeks without work experienced by displaced workers between 1979 and 1984, not necessarily continuously. Also, the terms "unemployed" and "without work" are not synonymous, because the latter might include a period of joblessness when workers were not looking for work, and so would be defined as out of the labor force, not unemployed.

¹⁰Richard C. Wilcock and W.H. Franke, *Unwanted Workers: Permanent Layoffs and Long-Term Unemployment* [New York: Glencoe Free Press, 1963],

Figure 3-3.-Regional Divisions of the United States

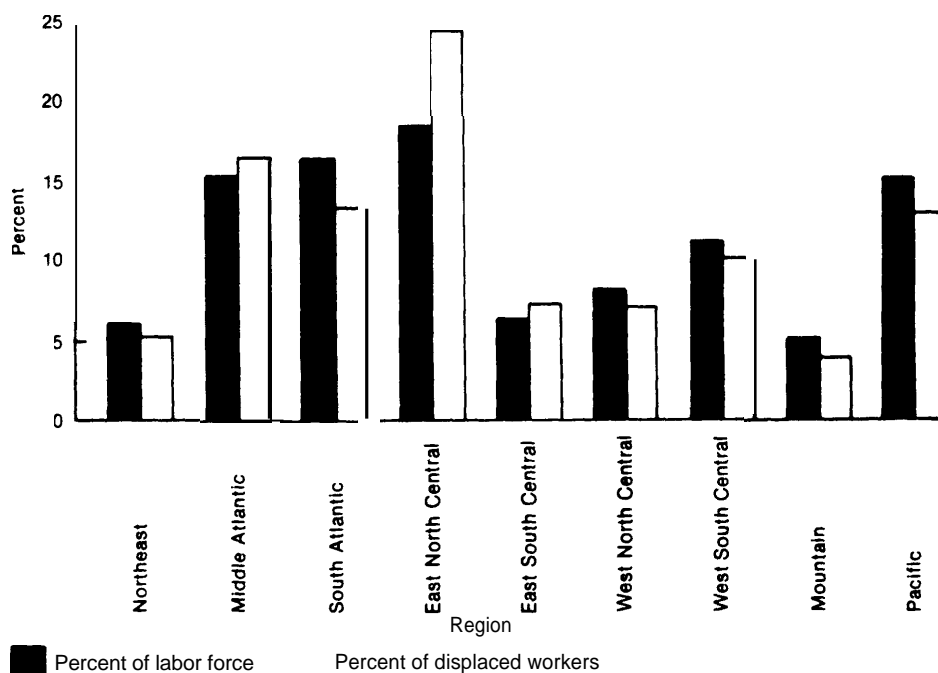


after the layoffs, unemployment among these displaced workers ranged from 22 to 65 percent, largely depending on the state of the local economy. But even in the most prosperous of the cities sampled—Peoria, Illinois, where the community-wide unemployment rate was below 2 percent shortly after the plant closing and was still only 3.8 percent 1 year later—22 percent of the displaced workers were out of work a year after the layoffs. In every one of the five cities, the unemployment rate for displaced workers was far higher than the overall local rate, from 6 times as high in Peoria to 12 and 13 times as high in East St. Louis, Illinois, and Oklahoma City.

Other case studies underscore the point that displaced workers experience unusual and prolonged unemployment. Two years after the 1956 shutdown of the Packard automobile manufacturing company, which displaced 4,000 workers, Aiken, Ferman, and Sheppard questioned a representative sample of 260 ex-Packard workers.¹¹ Only 45 percent had jobs. Another 32 percent had found work at some time during the 2 years, but were currently

¹¹Michael Aiken, Louis A. Ferman, and Harold L. Sheppard, *Economic Failure, Alienation, and Extremism* (Ann Arbor: MI University of Michigan Press, 1968). These figures apply to white workers; 45 black workers in the Packard closing were surveyed separately.

Figure 3-4.—Percentage of Labor Force and Percentage of Displaced Workers, by Region, 1984



SOURCE. U.S. Department of Labor, Bureau of Labor Statistics, end unpublished data; and U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, various issues.

unemployed. (With no seniority in their new jobs, they were the first to be laid off.) Twenty-three percent had not yet found any job. At the time of the survey, the auto industry was depressed, and Michigan's unemployment rate was 13.5 percent. The ex-Packard workers' unemployment rate was 55 percent.¹²

More recently, Aronson and MacKersie tracked workers who were displaced when three large companies (Westinghouse, Brockway Motors, and GAF) closed plants in New York State in 1976 and 1977, laying off a total of 2,800 workers. Over one-fifth of the workers sampled remained without jobs for a year

or more, while local unemployment rates were between 6 and 8 percent.¹⁴

Hansen and Bentley reported on the closing of four sugar beet processing plants in Utah, Idaho, and Washington in 1979, in which approximately 3,000 workers were laid off.¹⁵ Surveying the displaced workers 1 to 1½ years after the shutdowns, these authors found unemployment ranging from 19 to 42 percent at the various sites. Overall, at the four sites 27 percent of the former sugar plant workers were

¹⁴The reported Unemployment rate for these displaced workers was higher: 31 percent for 1 year or longer after the layoffs. However, the authors believe that this figure included some workers who were in full-time training and should not have been reported as unemployed. *ibid.*, pp. 33-34.

¹⁵Gary B. Hansen and Marion T. Bentley, *Mobilizing Community Resources to Cope With Plant Shutdowns: A Demonstration Project* (Logan, UT: Business and Economic Development Series, Utah State University, 1981).

¹²*Ibid.*, p. 31 ff.

¹³Robert Aronson and Robert MacKersie, *Economic Consequences of Plant Shutdowns in New York State* (Ithaca, NY: New York State School of Industrial and Labor Relations, Cornell University, 1980), pp. 11-12.

Table 3-4.—Employment Status and Area of Residence in January 1984 of Displaced Workers^a (in thousands)

| Characteristic | Total | Regional totals (in thousands) | | | | | | | | |
|---|-------|--------------------------------|-----------------|--------------------|--------------------|----------------|--------------------|--------------------|--------------|---------|
| | | New England | Middle Atlantic | East North Central | West North Central | South Atlantic | East South Central | West South Central | Mountain | Pacific |
| Total | 5,091 | 260 | 794 | 1,206 | 426 | 664 | 378 | 484 | 211 | 667 |
| Employment status in January 1984: | | | | | | | | | | |
| Employed | 3,058 | 171 | 428 | 621 | 276 | 461 | 209 | 344 | 148 | 399 |
| Unemployed | 1,299 | 48 | 225 | 400 | 96 | 117 | 113 | 85 | 33 | 181 |
| Period of unemployment, percentage of unemployed workers: | | | | | | | | | | |
| Less than 5 weeks | 22 | ^b | 24 | 21 | 13 | 29 | 17 | 25 | ^b | 18 |
| 27 weeks or more | 39 | ^b | 37 | 47 | 48 | 26 | 52 | 30 | ^b | 28 |
| Not in labor force | 733 | 41 | 141 | 185 | 54 | 85 | 56 | 55 | 30 | 86 |

^aData refer to persons with tenure of 3 or more years in one job, who lost or left that job between January 1979 and January 1984 because of plant closings or moves, slackwork, or the abolishment of their positions or shifts.

^bData not shown where base is 18SS than 75,000.

SOURCE: Paul O. Flaim and Ellen Sehgal, "Displaced Workers of 1979.83: How Well Have They Fared?" *Monthly Labor Review*, June 1985.

Table 3-5.—Displaced Workers, 1979-83: Weeks Without Work Since Job Loss (numbers in thousands)

| | Total ^a | Weeks without work since job loss | | | | Median number of weeks |
|-----------------|--------------------|-----------------------------------|-------|-------|--------------|------------------------|
| | | Less than 5 | 5-26 | 27-52 | More than 52 | |
| Total | 5,091 | 1,173 | 1,619 | 983 | 1,211 | 24.1 |
| Men | 3,328 | 766 | 1,115 | 644 | 732 | 21.8 |
| Women | 1,763 | 407 | 504 | 339 | 479 | 26.3 |

^aData refer to persons with tenure of 3 or more years in one job, who lost or left that job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

SOURCE: Paul O Flaim and Ellen Sehgal, "Displaced Workers of 1979-83: How Well Have They Fared?" *Monthly Labor Review*, June 1985

out of work, 59 percent had jobs, and the rest had dropped out of the labor market.

Hansen and Bentley discovered that neither the local Employment Service nor anyone else in the four communities had accurate information about unemployment among displaced workers after the shutdowns. Some community leaders greatly underestimated it. Nor were they informed about other problems the workers faced. "This lack of reliable data hindered [community] responses . . . and left unanswered the pervasive and factually untrue assertions that there were no problems of unemployment or other needs. "

Lower Pay

A second major cost of displacement is that many workers who are reemployed take worse jobs, at lower pay and lower status, than they had in their old jobs. For example, after the shutdowns of the meatpacking and laundry equipment plants in 1959 and 1960, displaced workers who found jobs settled for pay that averaged 9 to 41 percent less (depending on the city) than the pay in their old jobs.¹⁶ Similarly, Dorsey's study of workers displaced in 1961 by a Mack truck plant closing in Plainfield, New Jersey, showed a 40-percent drop in the wages of reemployed workers.¹⁷

The BLS survey of displaced workers indicated rather more moderate losses of earnings (see the earlier discussion and table 3-6). As noted above, the analysis of the BLS survey results sponsored by the Labor Department's Bu-

reau of International Labor Affairs (ILAB) adjusted reemployment earnings for inflation, and found average declines of 12 percent for white-collar and service workers and over 15 percent for blue-collar workers.¹⁸ This analysis covered only former full-time workers who found new full-time jobs and reported their earnings on both the old and new jobs. It did not take into account earnings losses of former full-time workers who were reemployed in part-time jobs.

The occupational group that suffered the greatest losses in earnings were blue-collar semiskilled and unskilled workers, including machine operators, assemblers, and laborers. In this group, 37 percent took pay cuts of 20 percent or more (not adjusted for inflation), compared with 26 percent of managers and professionals and 30 percent of workers in all occupations (table 3-6). The ILAB study, showing average reemployment earnings for occupational groups adjusted for inflation, found that professionals had only a 3-percent drop in earnings, while the decline for managers was much greater—16 percent. This compares with 18-percent declines in average earnings of unskilled and semiskilled blue-collar operatives and laborers, but only 10 percent for skilled blue-collar craft workers.

By industry, workers displaced from durable goods manufacturing jobs, which are generally well paid, had the steepest drop in earnings. As table 3-7 shows, the 980,000 workers who formerly worked in durable goods industries, were then displaced, and afterward found new jobs, reported a drop in median earnings from

¹⁶Wilcock and Franke, op. cit., p. 144.

¹⁷John W. Dorsey, "The Mack Truck Case: A Study in Unemployment," *Studies in the Economics of Income Maintenance*, Otto Eckstein (ed.) (Washington, DC: The Brookings Institution, 1967), pp. 202-203.

¹⁸Information from a preliminary draft report of the results (Podgursky and Swain, op. cit.) was provided to OTA by the U.S. Department of Labor, Bureau of International Labor Affairs.

Table 3-6.—Earnings of Displaced Workers Holding Full-Time Wage and Salary Jobs in January 1984, Jobs Lost and Replacement Jobs, by Occupation^a (numbers in thousands)

| Occupation of lost job | Earnings on replacement job relative to earnings on job lost | | | | | | | | | |
|--|--|------------|-----------------------------|------------|----------------------------------|------------|--------------------------|------------|--------|------------|
| | 20 percent or more below | | Below but within 20 percent | | Equal or within 20 percent above | | 20 percent or more above | | | |
| | Number | Percentage | Number | Percentage | Number | Percentage | Number | Percentage | Number | Percentage |
| Total reporting | 2,045 | | | | | | | | | |
| Total who lost full-time wage and salary jobs ^b . . . | 2,045 | | 621 | 30 | 320 | 16 | 571 | 28 | 533 | |
| Management and professional | 342 | | 90 | 26 | 45 | 13 | 102 | 30 | 105 | 31 |
| Technical, sales, and administrative support | 427 | | 106 | 25 | 65 | 15 | 120 | 28 | 36 | 32 |
| Technicians and related support | 57 | | 18 | 32 | 6 | 10 | 15 | 26 | 18 | 32 |
| Sales occupations | 177 | | 42 | 24 | 27 | 15 | 43 | 24 | 65 | 37 |
| Administrative support, including clerical | 192 | | 45 | 23 | 32 | 17 | 62 | 32 | 53 | 28 |
| Service occupations | 64 | | 17 | 27 | 13 | 20 | 18 | 28 | 16 | 25 |
| Precision production, craft, and repair | 470 | | 136 | 28 | 82 | 17 | 139 | 30 | 113 | 24 |
| Mechanics and repairers | 122 | | 33 | 27 | 23 | 19 | 38 | 31 | 28 | 23 |
| Construction trades | 136 | | 33 | 24 | 21 | 15 | 50 | 37 | 32 | 24 |
| Other | 212 | | 70 | 33 | 38 | 18 | 51 | 24 | 53 | 25 |
| Operators, fabricators, and laborers | 722 | | 267 | 37 | 112 | 16 | 187 | 26 | 156 | 22 |
| Machine operators, assemblers, and inspectors | 470 | | 164 | 35 | 76 | 16 | 125 | 27 | 106 | 23 |
| Transportation and material moving occupations | 147 | | 55 | 37 | 24 | 6 | 38 | 26 | 30 | 20 |
| Handlers, equipment cleaners, helpers, and laborers | 106 | | 49 | 46 | 13 | 12 | 24 | 23 | 20 | 19 |
| Farming, forestry, and fishing | 21 | | | 24 | 3 | 14 | 5 | 24 | 8 | 38 |

^a Data based on persons with tenure of 3 or more years in one job, who lost or left that job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

^b Includes former full-time workers, who lost jobs they had held for at least 3 years, who were reemployed in a full-time wage or salary job, and who reported earnings both on the old and new jobs.

SOURCE: Paul O. Flaim and Ellen Sehgal, "Displaced Workers of 1979-83: How Well Have They Fared?," *Monthly Labor Review*, June 1985.

Table 3-7.—Reemployed Displaced Workers, by Selected Industry of Lost Jobs, and Weekly Earnings on Lost Job and Job Held in January 1984^a

| Industry of lost job | Reemployed workers \$in thousands) | Median weekly earnings | |
|--|---------------------------------------|------------------------|--------------------------|
| | | Lost job | Job held in January 1984 |
| Durable goods | 980 | \$344 | \$273 |
| Primary metals | 100 | 407 | 246 |
| Transportation equipment . . | 222 | 399 | 319 |
| Nondurable goods | 493 | 264 | 254 |
| Textile mill products | 48 | 181 | 187 |
| Apparel and other finished textile products | 83 | 202 | 197 |

^aData refer to persons with tenure of 3 or more years in one job, who lost or left that job between January 1979 and January 1984 because of plant closings or moves, slack work, or the abolishment of their positions or shifts.

SOURCE: Paul O Flaim and Ellen Sehgal, "Displaced Workers of 1979-83: How Well Have They Fared?" *Monthly Labor Review*, June 1985.

\$344 per week on the old job to \$273 per week on the new one. By contrast, the much lower median weekly earnings of textile mill workers did not decline after displacement but rose slightly from \$181 to \$187 per week. (These wages are in current dollars, without adjustment for inflation.)

Many displaced workers who eventually find new jobs at wages equal to their former wages still lose earnings over time, because they would have received pay raises as well as adjustments for inflation if they had been able to keep their old jobs. Two large studies of thousands of displaced factory workers in the 1960s and early 1970s compared the earnings of these workers with earnings of workers who kept their jobs in the same industries. Both studies found substantial losses for the displaced workers in the first 2 years after layoff.

Helen, Jehn, and Trost, studying 9,479 workers from 42 plants that closed between 1969 and 1972, found that male workers in nine industries lost, on the average, 24 percent of expected earnings the first year after the plant closed, and 14 percent the second year.¹⁹ The average losses for women were 27 percent the first year and 11 percent the second. First-year losses for some large groups of workers (female workers in textiles and weaving, men's clothing, and radio and television manufacturing) were nearly 40 percent.

¹⁹Arlene Helen, Christopher Jehn, and Robert P. Trost, *Earnings Losses of Workers Displaced by Plant Closings* (Alexandria VA: The Public Research Institute, 1981).

After the second year, this study found that the earnings gap between the victims of plant closings and workers who kept their jobs dwindled rapidly; by the third or fourth year the losses for displaced workers were small or negligible. In fact, the average earnings of displaced women workers had surpassed those of the comparison group by the fourth year. The study concluded that the earnings losses for workers displaced in plant closings are not permanent, but can be large. In each of the first 2 years after the plant closings, earnings losses were at least as high as 20 percent for displaced women workers in four of the nine industries, and for men in three.

Jacobson's earlier study found rather more persistent earnings losses for displaced workers.²⁰ This study looked at the earnings experience of 1,024 prime-age male workers who lost jobs (not necessarily due to plant closings) between 1962 and 1966 in 11 diverse manufacturing industries. The job losers' earnings were compared with those of similar workers in the same industries who kept their jobs. Two years after layoff, the average displaced worker in all 11 industries had lost earnings, with losses ranging from 1 percent in television receiver manufacturing to 47 percent in steelmaking.

²⁰Louis S. Jacobson, "Earnings Losses of Workers Displaced From Manufacturing Industries," in U.S. Department of Labor, *The Impact of International Trade and Investment on Employment* (Washington, DC: U.S. Government Printing Office, 1978); Louis Jacobson and Janet Thomason, *Earnings Loss Due to Displacement*, report prepared for the U.S. Department of Labor (Alexandria, VA: The Public Research Institute, 1979).

Six years afterward, several groups of workers had not yet recouped. Automobile, steel, meatpacking, aerospace, and petroleum refining workers still had average earnings losses of 12 to 18 percent. Generally, the losses were greatest in better paying, strongly unionized industries. But even workers displaced from lower wage industries such as women's clothing, electronics, and shoes, had only pulled about even. Workers displaced from two industries that faced strong foreign competition in the 1970s (television receiver manufacturing and cotton weaving) were substantially better off after 6 years than the workers in the comparison group.

Why the two studies had different findings on the persistence of earnings loss is not entirely clear. Possibly, the greater prosperity of the mid-1960s had the paradoxical effect of exaggerating the earnings losses of the displaced workers that Jacobson studied. Those who kept their jobs made large wage gains relative to the job losers, whose worklives were interrupted. In the less prosperous 1970s, the job keepers did not do much better than the job losers, except for the first year or two. Both studies did find substantial losses for most displaced workers in the first 2 years and higher losses in high-wage unionized industries.

The Congressional Budget Office (CBO) found that displaced workers generally experience long-term wage losses, and the greater their seniority in the old job, the greater their loss.²¹ CBO estimated that, 2 to 6 years after displacement, workers with less than 10 years tenure on their old jobs were earning 91 percent of the wages they would have made had they not been displaced; workers with 10 to 20 years tenure were earning 81 percent; and those with 20 years or more tenure were earning 75 percent.

²¹U.S. Congress, Congressional Budget Office, *Dislocated Workers: Issues and Federal Options* (Washington: CBO, 1982), pp. 13, 17-18. CBO staff calculated the wage losses based on unpublished results of a survey of 916 displaced workers in 13 States, from New England to California, in a variety of industries. The survey was conducted by the Institute for Policy Research and Evaluation of Pennsylvania State University in 1975.

For most displaced workers, the first few months of job loss are cushioned by unemployment insurance; some also get supplementary unemployment benefits or severance pay from their former employers, and some receive special government aid such as Trade Adjustment Assistance (TAA). Despite these cushions, the combined effects of unemployment (often protracted unemployment) and lower wages after reemployment depress the incomes of displaced workers significantly. Rosen's recent study of blue-collar women workers laid off from the clothing and electrical goods industries in New England supports this conclusion. Even with a combination of unemployment insurance, TAA benefits, and reemployment within a few months, the average worker lost 20 percent of her annual earnings in the year following job loss.²² The Aronson-MacKersie study of displaced workers in New York State disclosed a similar (18-percent) drop in family income.²³

Loss of Benefits

Loss of benefits is another serious economic burden for the displaced worker. Older workers' seniority is wiped out, which often means loss of protection against future layoffs. Health benefits usually stop; individual replacement policies may cost more than twice as much. Pension benefits suffer.

To many displaced workers, the loss of health benefits is a most urgent concern. Of the 5.1 million adult workers displaced from 1979 to 1983, 4 million—78 percent—were covered by group health insurance on their old jobs. By January 1984, only 65 percent were covered under any plan, group or individual. Of those who were unemployed, 60 percent had no coverage, and 40 percent of those out of the labor force were not covered. Among black unemployed workers who were previously covered, 75 percent had no coverage at the time of the

²²Ellen I. Rosen, *Hobson's Choice: Employment and Unemployment Among "Blue Collar" Women Workers in New England*, report prepared for the U.S. Department of Labor, Employment and Training Administration (Boston, MA: Social Welfare Research Institute, Boston College, 1982), pp. 133-134.

²³Aronson and MacKersie, *op. cit.*, p. 51.

survey. The ILAB-sponsored analysis of the same survey examined losses of group health insurance coverage. This study found that 70 percent of blue-collar workers had group coverage on their old jobs; of those previously covered by group insurance, 42 percent had lost it. Of white-collar and service workers, 67 percent formerly had group coverage, and 30 percent of them had lost it.²⁴

Pension rights of displaced workers now have some protection by law, but are by no means completely secure. Before 1974, when the Federal Government began to regulate private pension plans under the Employment Retirement Income Security Act (ERISA), displaced workers could lose all their pension rights when a company closed its doors. This happened to the workers displaced in the Packard shutdown in 1956, and to most of the Massachusetts shoe workers displaced by shutdowns in the early 1970s.²⁵ Even under ERISA, however, workers are still likely to lose important pension benefits in a plant closing. Most workers cannot pick up their same pension plans in new jobs; portable pensions that follow the individual worker are rare, and multi-employer pension plans cover less than one-quarter of all participants in private plans. Unless displaced workers are able to continue in their same plans on new jobs, they cannot continue to add years of service as a base for higher retirement pay. They also lose credit for their years of service before 1974, when ERISA took effect. Younger workers who were on their way to eligibility for pensions (after a vesting period, generally 5 to 10 years) may have to go back to zero.²⁶

²⁴Information provided by U.S. Department of Labor, Bureau of International Labor Affairs, from Podgursky and Swain, op. cit.

²⁵Barry Bluestone and Bennet Harrison, *The Deindustrialization of America* (New York: Basic Books, 1982), p. 58.

²⁶U.S. Congress, Congressional Budget Office, *Work and Retirement: Options for Continued Employment of Older Workers* (Washington, DC: CBO, 1982); and U.S. Department of Labor, Labor-Management Services Administration, *What You Should Know About the Pension and Welfare Law* (Washington, DC: U.S. Department of Labor, 1978),

Early Retirement

The older displaced worker who has the option of early retirement is better off than one who remains out of work for months or who has no choice but to take a substantial pay cut to get another job. Many unions have bargained for early retirement as a benefit for older workers who are permanently laid off. Yet, for older people who are still vigorous and eager to work at full pay, pensioning off may be only half a loaf.

In general, for most people, retirement is apparently a positive experience. Parries and his associates followed a nationally representative sample of men for 15 years, from 1966 to 1981, as the men passed from middle age into old age.²⁷ Three-fourths of those who had retired said that retirement met or exceeded their expectations; 70 percent said they would retire at the same age if they had it to do over again. The great majority also reported they were able to get by on their retirement incomes. Typically, family income was three-fifths of what it had been the last year before retirement. The major exception to the general experience of economic and psychological satisfaction with retirement was seen among men who had retired early because of ill health.

Despite the number and richness of studies of retirement in general, data on early retirement after displacement are scanty. Most people, except those in ill health, retire by choice. Whether those who retire involuntarily because their jobs have disappeared are as satisfied as the general run of retirees, or whether they share the dissatisfactions of those who retired early due to ill health, is not known.

Relocation

Ordinarily, no more than 10 percent of displaced blue-collar workers move to new communities in search of other jobs. Americans may be mobile compared with the citizens of other industrial democracies, but it is easy to

²⁷Herbert S. Parries, et al., *Retirement Among American Men*, report to the U.S. Department of Labor, Employment and Training Administration (Columbus, OH: Ohio State University, Center for Human Resource Research, 1984).

exaggerate this characteristic. In a recent 5-year period, 47 percent of American households moved, compared with 33 percent in Japan and 38 percent in the United Kingdom, but a relatively small number of people who moved frequently accounted for a large proportion of the moves in the United States. Furthermore, half the moves took place within local areas; only 20 percent were across a State line.²⁸

The leaving of friends, family, and community are serious social and psychological costs of moving for many workers. The financial costs can be substantial as well—e.g., selling a house at a loss in a depressed area, finding affordable housing in a more prosperous but more expensive area, and, increasingly in recent years, giving up a spouse's job in a two-income family. Social research on why families move suggests that most people prefer to stay where they are. If they move, it is usually because they are pushed out by unfavorable economic conditions, not because they are lured out by the promise of better jobs elsewhere.²⁹

Of the displaced workers surveyed in 1984, 13.5 percent reported that they had moved to a different city or county to look for work or take a different job.³⁰ Nearly one-quarter of those surveyed were managerial, professional, or sales workers—groups which are ordinarily more inclined to relocate than service or blue-collar workers. Under special circumstances, such as a guaranteed job with the same company at the other end, the number of blue-collar workers deciding to relocate may rise substantially, to 20 percent or more (see chapter 6).

Mental and Physical Stress

The economic stresses of displacement take a toll in mental and physical health. A family with its savings wiped out after a long spell of unemployment and with no earnings coming in is extremely vulnerable to stress-related ill-

ness. Typical of prolonged unemployment are increases in anxiety, depression, physical ailments, alcoholism, and family strife.

One of the Cleveland steelworkers dismissed when U.S. Steel closed plants in 1984 was acutely aware of the emotional strains ahead. As soon as he got news of the plant closing, he said, "I sat down with my wife and told her I'm going to apologize in advance for the next year. In a year I could be like too many of my laid-off friends, single and going to AA meetings every night."³¹

Cobb and Kasl found physical evidence of stress in medical examinations of 100 blue-collar workers displaced in two plant closings in the 1960s.³² The displaced workers, compared with 74 controls, had an increased incidence of ulcers, hypertension, and arthritis. Other findings were increased levels of cholesterol, blood sugar, and uric acid, suggesting increased risks of heart disease, diabetes, and gout. Two workers in the group committed suicide, and two others tried or threatened it. The authors observed that the suicide rate was 30 times the national norm for blue-collar workers, although the study numbers were too small to be statistically significant. In followup studies, Cobb and Kasl found that many of the stress-related symptoms they observed disappeared rather quickly. Most of the workers found new jobs, similar in pay and status to their old jobs, without long delays; the average duration of unemployment was 15 weeks. The plant closings in this study occurred during the prosperous 1960s when unemployment rates were low.

Brenner found a statistical relationship between employment rates and various indica-

²⁸Marc B. dijk, "Worker Mobility in Response to a Plant Closure," *Managing Plant Closings and Occupational Readjustment: An Employer's Guidebook*, Richard P. Swigart (ed.) (Washington, DC: National Center on Occupational Readjustment, Inc., 1984), p. 40.

²⁹Bluestone and Harrison, *op. cit.*, pp. 102-104.

³⁰Flaim and Sehgal, *op. cit.*, p. 11.

³¹Margaret Engel, "Plant's Closing Exacts a Toll on Workers' Spirits," *The Washington Post*, Jan. 3, 1984; see also Earl Bohn, "Steel-Plant Closing Stuns Johnstown, PA," *The Washington Post*, Jan. 3, 1984.

³²Sidney Cobb and Stanislas V. Kasl, "Some Medical Aspects of Unemployment," report prepared for the U.S. Department of Health, Education, and Welfare, National Institute for Occupational Safety and Health, 1977; Jeanne PriolGordus and Sean P. McAlinden, *Economic Change, Physical Illness, Mental Illness, and Social Deviance*, study prepared for U.S. Congress, Joint Economic Committee, Subcommittee on Economic Goals and Intergovernmental Policy, 98th Cong., 2d sess. (Washington, DC: U.S. Government Printing Office, 1984),

tors of health and well-being. He reported that the 14.3-percent rise in unemployment between 1973 and 1974 was associated with 45,936 additional deaths, including 28,510 excess deaths from heart and vascular disease, 403 homicides, 270 suicides, and 8,416 additional mental hospital admissions.³³

The emotional costs of plant closings, though difficult to quantify, are among the more distressing burdens borne by displaced workers. Some feel real bereavement. Not only is their livelihood gone, but the social center of their lives has vanished. When the Packard plant closed, half the displaced workers had been with the company for a quarter century or more. A 48-year-old machine operator who had started at the plant when he was 19 said: "I could have cried. It's like losing your home."³⁴

³³M. Harvey Brenner, *Estimating the Effects Of Economic Change on National Health and Social Well-Being*, study prepared for the U.S. Congress, Joint Economic Committee, Subcommittee on Economic Goals and Intergovernmental Policy, 98th Cong., 2d sess. (Washington, DC: U.S. Government Printing Office, 1984), p. 3.

³⁴Aiken, et al., op. cit., p. 23.

Thirty years later, textile workers in North Carolina felt the same way. When the Old Fort Finishing Company shut down in 1984, a 51-year-old veteran, who had worked in the plant since high school, said: "It hit us all like a lightning bolt, or a death in the family."³⁵

Wilcock and Franke, in their five-city study of plant closings, suggested that the psychological costs may be harder to bear even than economic hardship.

Perhaps the most serious impact of shutdowns, particularly for the long-term unemployed, was a loss of confidence and a feeling of uneasiness . . . The unemployed worker loses his daily association with fellow workers. This loss means not only disappearance of human relationships built up over a period of years but also the end of a meaningful institutional relationship.³⁶

³⁵Bill Petersen, "Death of a Textile Plant," *The Washington Post*, Jan. 31, 1985.

³⁶Wilcock and Franke, op. cit., pp. 166, 185.

THE WORKERS MOST AFFECTED

The workers hardest hit by displacement are older workers, the less educated, the less skilled, minorities and, in many cases, women. In almost every survey and case study over the past 25 years, a very strong finding is the link between prolonged unemployment and age.³⁷

Older Workers

When the Mack truck plant in Plainfield, New Jersey, closed in 1961, laying off nearly 3,000 production workers, age was found to be the most important factor in duration of unemployment.³⁸ A study of workers displaced by the 1964 shutdown of the Studebaker auto plant in South Bend, Indiana, showed the same effect; age was more strongly linked with un-

employment than race, education, skill, or any other factor examined.³⁹

The Wilcock and Franke five-city study found that in each city the long-term unemployment rate (1 year or more out of work) was twice as high for workers 55 and over as for workers under 35.⁴⁰ The study of ex-Packard workers found that those over 60 averaged 15 months without work, compared to 7 months for those under 50.⁴¹ In a typical comment, one of the Packard workers said: "I went to fifteen places for work. All they want is a young man. My record at Packard didn't mean a thing."⁴²

³⁷J. John Palen and Frank J. Fahey, "Unemployment and Reemployment Success: An Analysis of the Studebaker Shutdown," *Industrial and Labor Relations Review*, January 1968.

⁴⁰Wilcock and Franke, op. cit., p. 55.

⁴¹Aiken, et al., op. cit., p. 31. These figures apply to white workers; minority workers were analyzed separately.

⁴²Ibid., p. 33.

³⁸Jeanne P. Gordus, Paul Jarley, and Louis A. Ferman, *Plant Closings and Economic Dislocation* (Kalamazoo, MI: The Upjohn Institute for Employment Research, 1981), p. 81.

³⁹Dorsey, op. cit., pp. 196-197.

Several studies have documented the greater difficulties less educated workers face in finding new jobs after displacement.⁴³ This handicap is often linked with age. Older Americans, by and large, have fewer years of schooling than younger ones.

Although age discrimination in hiring is now against the law, the pattern persists. The BLS survey of displaced workers in 1984 showed higher unemployment rates for workers aged 55 to 64 than for younger groups, with especially high rates for older men (see table 3-1). A recent BLS study affirmed the finding. Analyzing unemployment data from 1968 to 1981, Rones concluded that older people in general do not have high unemployment rates, but once they are unemployed they "are far less likely to find a job than are their younger counterparts."⁴⁴ He found that the duration of unemployment rises with age, and that this link is most pronounced for older workers who persist in looking for a job until they find one, rather than dropping out of the labor market.

A senior BLS official recently gave several examples of older well-qualified workers who could not find work, even in fields where demand is strong, for example, technical writing in the aircraft industry. said the official: "If you're a male over 55 looking for a job, you're competing with 16 to 19 year olds" for entry level jobs such as retail sales clerk or janitor, "Age is a terrible disease in the American job market," he said.⁴⁵

Some directors of retraining and reemployment programs report a different experience. One said, "We have good luck placing older workers, because they read and add better than younger workers, and they know the line employers want to hear." Nonetheless, even though some employers may value older workers for their reliability and stability, others consider them harder to train for new tasks, and perhaps less productive. An older worker may also be perceived as a poor investment for

training, or too costly in health insurance and pension benefits.⁴⁶ Well-run displaced worker programs may indeed help older workers overcome the age barrier; but the nationwide survey results and unemployment figures consistently support the conclusion that the barrier exists.

For middle-aged as well as older workers, the very strengths of maturity, steadiness, and long tenure with one employer may become weaknesses in the search for a job after displacement. Workers with more seniority are likely to be the last laid off in a declining industry, and therefore may find themselves in a poor job market after others have had a head start. Many mature displaced workers have held only one job in their lives and have no idea how to look for a job effectively.

Mature workers usually find it much harder to move away from a distressed area than do younger workers. Many are strongly rooted by family and community ties; if they own a home, it may be unsalable; and they are perhaps less adventurous than younger people about moving to an unfamiliar town with no assurance of a job or a place to live. To many mature and older displaced workers, the financial and psychological costs of moving away are simply too high.⁴⁷

Less Skilled Workers

In general, the less skilled a worker, the harder it is to find a new job after displacement. The BLS survey found that the occupational group with the worst reemployment experience was the unskilled handlers, equipment cleaners, helpers, and laborers (see table 3-2). Only 42 percent of these displaced workers were employed in January 1984, while 47 percent remained unemployed; this compares with 60 percent employment and 26 percent

⁴³Ibid., p. 87.

⁴⁴Philip L. Rones, "The Labor Market Problems of Older Workers," *Monthly Labor Review*, May 1983, p. 10.

⁴⁵Ronald Kutscher, Assistant Commissioner, U.S. Bureau of Labor Statistics, interview, November 1983.

⁴⁶Gordus, et al., op. cit., p. 84.

⁴⁷Marc Bendick, Jr., and Judith Radlinski Devine, "Workers Dislocated by Economic Change: Do They Need Federal Employment and Training Assistance?" Appendix B in National Commission for Employment Policy, Seventh Annual Report: *The Federal Interest in Employment and Training* (Washington, DC: National Commission for Employment Policy, 1981), p. 204; and Hansen and Bentley, op. cit., p. 150.

unemployment for the entire group of 5.1 million adult workers displaced from their jobs in the 5 years up to 1984.

According to some case studies, semiskilled workers have special difficulties in finding new jobs. Years of experience in one job may give a worker well-honed skills that are not transferable; this seems especially true of semiskilled operatives in manufacturing industries. For example, Dorsey's study of the dislocated Mack truck workers discovered that skilled workers had no trouble finding jobs; in a sample taken 10 months after the plant closed, all the skilled workers were reemployed, compared with a 70-percent reemployment rate for all the ex-Mack workers.⁴⁸ Unskilled workers were next most successful in finding new jobs. The semiskilled, the largest group laid off, were least successful. Their speed and efficiency in running their own particular machines in the Mack plant were not versatile enough skills to be valuable in new jobs; if they found work it was at pay substantially less than their previous wages.

Minorities

As table 3-1 showed, minority workers are at a disadvantage in finding new jobs after displacement. Forty-one percent of black displaced workers were unemployed in January 1984. Hispanic workers, somewhat better off at an unemployment rate of 34 percent, were also more likely to be jobless than white displaced workers (23 percent unemployed).

Case studies of the past show there has been little change in the pattern. Nineteen months after the Packard company closed down in 1956, almost 40 percent of its displaced black workers were unemployed, compared with one-quarter of the white workers.⁴⁹ Wilcock and Franke found in their five-city study (19w1-60) that unemployment was especially severe among blacks, even though they were younger and about as well educated as whites; that when the black workers found new jobs they took bigger pay cuts than whites; and that after

retraining they were less likely than whites to find jobs using the skills they had learned.⁵⁰ The discrepancies were large. For example, in East St. Louis 85 percent of blacks were unemployed for 6 months or more, compared with 61 percent of whites,

Women Workers

One-third of the adult workers displaced from their jobs between 1979 and 1984 were women. In some situations, the effects of displacement are harsher for women than for men. In others, their experiences may simply be different,

The BLS survey found that the unemployment rate for women workers was somewhat below that for men, but the reemployment rate for women was markedly lower (table 3-1). The difference lay in the fact that many more women—24 percent for women v. 9 percent for men—were out of the labor force at the time of the survey. How many of these women stopped looking for work by choice or retirement, and how many out of discouragement, was not revealed by the survey. The period of time without a job was also longer for women than for men, 26 v. 22 weeks (table 3-5); again, it is not clear whether some women were out of the labor force by choice during at least part of that time.

Case studies shed further light on women workers' experience of displacement. The older studies, dating from the 1960s, showed women at a great disadvantage in rates and duration of unemployment and in wage losses on getting new jobs.⁵¹ In some cases, unemployment rates among women were almost three times the rates for men.⁵² In plant closings where both men and women were laid off, and both had made about the same wages before layoff, reemployment wages were typically one-third lower for the women than for men.⁵³

⁴⁸ Dorsey, op. cit., p. 201.

⁴⁹ Aiken, et al., op. cit., p. 133.

⁵⁰ Wilcock and Franke, op. cit., pp. 53-54.

⁵¹ Gordus, et al., op. cit., pp. 89-90.

⁵² Herbert Hammerman, "Five Case Studies of Displaced Workers," *Monthly Labor Review*, June 1964, pp. 663-690.

⁵³ Wilcock and Franke, op. cit., pp. 144-145.

Recent experience is somewhat more mixed. A study of men and women workers who lost their jobs when a Pennsylvania thermostat control factory closed in 1981 found a continued disadvantage for women.⁵⁴ Both men and women had very high unemployment rates and great earnings losses, but the women were in worse straits. Fifteen months after the plant closed, 42 percent of the men were out of work, and 59 percent of the women. The reemployed men were making only 40 percent, and the women 30 percent, of their former earnings, which had been at the relatively low wage of \$6 per hour. Formerly full-time workers, many of them worked only sporadically or part time after displacement, which accounts in part for their very low earnings.

Rosen's study of New England blue-collar women displaced in 1979 showed rather different results. Five to nine months after they were laid off from their factory jobs (mainly in the apparel and electrical goods industries), 59 percent of the women were back at work, 24 percent were unemployed, 2 percent were "discouraged" and had given up looking for work, and 13 percent were out of the labor force.⁵⁵ Wage reductions for the reemployed workers were minor, about 2 percent. This small loss compares favorably with the earnings losses of male factory workers reported in other case studies.

Behind this comparison, however, lie some revealing figures. While their wage losses on the new jobs were slight, these women did not have a great deal to lose; their wages before lay-off averaged \$4.36 per hour, while the average U.S. manufacturing wage in 1979 was \$6.70 per hour. The higher a woman's wages before layoff, the greater was her wage loss. This study also indicated that repeated layoffs erode earning power; the best predictor of low wages

for the women job losers was the number of layoffs they had experienced in the past 10 years.

Despite their low wages, the women Rosen studied were earning more than pin money. Over 40 percent were the primary earners in their families, and of these, two-thirds were unmarried heads of households. Even the married women whose husbands had full-time jobs contributed, on average, more than one-third of their family incomes.

For the whole group, incomes dropped an average of 20 percent the year of the job loss, mainly because of the lost time at work; this was a net loss, taking into account unemployment insurance and transfer payments such as TAA benefits. One-third of those who were single heads of families dropped below the poverty line during the year they lost their jobs.

The "Handicap of Affluence"

Displacement is a leveling experience. The workers who lose the most are generally those who held the best jobs, with good pay, generous benefits, and job security in strongly unionized industries.⁵⁶ To "affluent" displaced workers, such as former steel and auto workers, the wages in available new jobs may look far less than adequate to meet their obligations.

A reemployment center in the Buffalo area, for example, was able to help 523 of 798 people enrolled in the program find jobs between September 1982 and September 1983; about half those enrolled were displaced steelworkers.⁵⁷ The center's 66-percent placement rate was more than respectable in this hard-hit steel, auto, and chemicals manufacturing region, where unemployment reached 15.2 percent in November 1982. However, the workers who got new jobs had to take very substantial pay cuts, dropping on average from \$10.00 per hour

⁵⁴ Kay A. Snyder and Thomas C. Nowak, "Sex Differences in the Impact of a Plant Shutdown: The Case of Robertshaw Controls," *Sociology Toward the Year 2000: The Social Galaxy*, Charles Babbitt (ed.) (Harrisburg, PA: Pennsylvania Sociological Society, 1983), pp. 228-239.

⁵⁵ Rosen, *op. cit.*, p. 93; see also Ellen I. Rosen, "Men and Women: The Dilemmas of Unemployment," report prepared for the U.S. Department of Labor, Employment and Training Administration [Boston, MA: Boston University and Nichols College, Center for Applied Social Science, n.d.).

⁵⁶ Jacobson's studies of displacement in several manufacturing industries, based on 1 percent of Social Security records, confirm this observation. See Jacobson, *op. cit.*; and Jacobson and Thomason, *op. cit.*

⁵⁷ L. M. Wright, Jr., "Case Study: Buffalo Worker Reemployment Center," report prepared for the U.S. Department of Labor, Employment and Training Administration (Princeton, NJ: Mathematica Policy Research, Inc., 1985), p. 50.

to \$6.62 per hour, or 34 percent below the previous average wage for these workers and 24 percent below the national average manufacturing wage, then \$8.73 per hour.

In other places, in better economic times, the decline in wages has been less severe. For instance, the Downriver Community Conference, a reemployment center near Detroit, placed 72 percent of 700 participating workers (displaced from the auto supply industry) between July 1980 and September 1981.⁵⁶ On average, these workers took a pay cut of about \$1 per hour, dropping from a wage of \$9.29 per hour before layoff to \$8.20 on the new job. (In real terms the drop was greater, since the inflation rate was then about 12 percent.) The experience of comparable workers displaced from similar plants indicated that, without the assistance of the Downriver program, reemployment wages would have ranged from \$5.50 to \$6.50 per hour. The average manufacturing wage at the time was \$7.50.

Some displaced workers hold out for a long time, getting by on savings, unemployment insurance, and earnings of other family members, before they settle for a job that means a steep drop in earnings. For workers who have been through layoffs in the past and then have been recalled, hope that the plant will reopen

⁵⁶D. Alton Smith, Jane Kulik, with Ernst W. Stromsdorfer, *The Downriver Community Conference Economic Readjustment Activity Program: Impact Findings From the First Phase of Operations*, report prepared for the U.S. Department of Labor, Employment and Training Administration (Cambridge, MA: Abt Associates, Inc., 1983), pp. 1-8.

dies hard. This resistance to taking a lesser job has been termed a "handicap of affluence" and an impediment to reemployment. "The more attractive the previous job, the more tempted a dislocated worker is to remain unemployed waiting for even a remote chance to return to that job."⁵⁹

The question may arise whether a sharp drop in the earnings of a formerly well-paid worker, unfortunate as that may be for the individual involved, should rightly be considered a problem for public policy. Framed this way, however, the question misses the point that it is unjust and unwise to expect displaced workers to bear the whole burden of displacement. For a mature, experienced worker to have to start over at the bottom of the economic ladder is definitely a heavy burden. This does not imply that displaced workers have a lifetime right to the wages they were earning before displacement, or that society must offer such a guarantee. The point is rather that many displaced workers need assistance in searching for, or retraining for, a new job with reasonable pay and prospects for security or advancement. It is in society's interest as much as the individual's to make sure that assistance is forthcoming. Failure to do so invites resistance to the technological advance and other changes that keep U.S. industry productive and competitive.

⁵⁹Bendick and Devine, *op. cit.*, p. 204; see also Linda LeGrande, U.S. Congress, Congressional Research Service, "Dislocated Workers: An Analysis," 1983, p. 22.

SOCIAL COSTS OF DISPLACEMENT

Whole communities, or whole regions, can be badly hurt by the loss of an important plant or the decline of an industry. Many old New England mill towns had not recovered a generation after losing textile plants to the South in the 1940s and 1950s. The Appalachian coal region, never prosperous, was crushed economically by the loss of 300,000 coal mining jobs from 1948 to 1968.

Plant closings and massive layoffs have ripple effects. The first wave hits the displaced

workers themselves; the second wave, suppliers for the plant that closed down and shops that the workers patronized; the third wave, the community, which once collected taxes from the plant, the workers, and the suppliers and shops they kept in business.⁶⁰ often these

⁶⁰Suppliers and their employees may in some cases suffer displacement effects before the primary industry. Companies under competitive pressure may try to cut costs by buying parts and subassemblies overseas or perhaps from new domestic suppliers in low-wage areas,

communities are pressed to provide extra social services and welfare from a shrunken tax base.

If the local economy is expanding, the ripple effects of layoffs may dissipate quickly. Indeed, research on business closures indicates that the most prosperous parts of the country have the highest rates of closings—and of employment loss—but also have the highest rates of employment gains, which more than compensate for the job losses.⁶¹ It is in areas of economic stagnation or decline that plant closings and mass layoffs can deliver a crippling blow to communities.

Systematic studies of the effects of plant closings and mass layoffs on communities are not available, but useful information can be found in a handful of individual case studies. Community effects are perhaps most clearly evident in an isolated company town. Consider, for example, the case of Anaconda, Montana.⁶² For 75 years, the economic base of this town of 12,000 people was the Anaconda Copper and Mining Company's smelter. It directly employed 1,500 people, 1,000 from Anaconda and 500 from neighboring Great Falls. In 1980, Atlantic Richfield, which had purchased Anaconda Copper and Mining a few years earlier, closed down the smelter. Ultimately, the loss of the smelter and the ripple effects from its closing meant the loss of \$42 million in annual payroll in a county where the payroll from all sources was only \$51 million.

In the immediate aftermath, local businesses were as much affected as the smelter workers. The town's Chevrolet dealer told a *Los Angeles Times* reporter: "The businessmen are getting the brunt of it right now. They gave [the smelter workers] \$3,500 in severance pay—I got caught with \$500,000 in cars." Thirty-six businesses

in the town laid off 20 percent of their employees, and one-fourth anticipated further layoffs. Some owners, who had expected their businesses to give them a comfortable retirement, went bankrupt. As for the smelter workers, a few took early retirement. Some left town, selling their houses for little more than half the purchase price.

Emotional trauma was roughly indicated by a few statistics. Visits to the Alcohol Service Center increased 52 percent, the number of people seeking drug counseling increased 50 percent, and admissions to the Mental Health Center rose 62 percent.

Ripple effects can be very extensive when industries that are central to a region's economy undergo decline. The fortunes of the auto industry, for instance, affect a wide network of other industries. The U.S. Department of Labor estimates that for every 100 jobs lost in the motor vehicle industry, another 105 jobs are lost in the direct supplier network, which includes steel, ferrous castings, aluminum, synthetic rubber, glass, plastics, and textiles. Bluestone and Harrison estimate that still another 95 jobs may be lost in more remote industries (e.g., iron ore mining) and in transportation, warehousing, and wholesale and retail trade. Altogether, then, if 1,000 auto workers are laid off permanently, as many as another 2,000 jobs might be lost.⁶³

Such estimates must be taken with caution, however. The multipliers used for estimating ripple effects (positive or negative) of business expansions and contractions are derived from input-output models. The models, though highly complex, still tend to simplify the real world. Their quantitative projections may be quite off the mark in specific cases. For example, when the Lykes Corporation shut down the Campbell Works plant of Youngstown Sheet and Tube in September 1977, various studies by local and State agencies projected that job losses in the Youngstown area would eventually affect 4,000

⁶¹Candee Harris, "The Magnitude of Job Loss From Plant closings and the Generation of Replacement Jobs: Some Recent Evidence," *The Annals of the American Academy of Political and Social Science*, vol. 475, September 1984.

⁶²Bill Curry, "Smelter Closing Gives Cash Registers a Hollow Ring," *Los Angeles Times*, Jan. 11, 1981; see also Curry, "Town Loses Its Payroll But Finds a Will to Survive," *Los Angeles Times*, Apr. 5, 1981, both cited in Bluestone and Harrison, *The Deindustrialization of America*, op. cit., pp. 70-71.

⁶³Bluestone and Harrison, op. cit., p. 74. These calculations were made for jobs lost because of lowered production. The ratio might be different for jobs lost because of increased productivity.

to 14,000 additional workers.⁶⁴ Many people feared that the Campbell Works closing would deal a mortal blow to the community.

What actually happened was that employment in the Youngstown area declined only slightly in the year after the closing. The national economy was booming, with a 4.1 percent increase for the year in nonagricultural jobs; the State of Ohio enjoyed a modest share in the boom, with a 2.1-percent expansion in jobs; and the decrease of jobs in Youngstown was small (1.4 percent). In this prosperous year, the local General Motors plant raised production, making up some of the loss in manufacturing jobs for the plant closing, and employment in retail trade rose. Two more local factors also helped to expand retail jobs: the laid-off steelworkers got liberal TAA benefits, and Youngstown grew as a retail center for neighboring counties in Ohio and Pennsylvania.

Nonetheless, the apprehension that the Campbell works closing would hurt Youngstown was not mistaken. Buss and Redburn, studying the area 2 years afterwards, concluded that if the plant had not shut down, Youngstown would

⁶⁴Terry F. Buss and F. Stevens Redburn, *Shutdown at Youngstown: Public Policy for Mass Unemployment* (Albany, NY: State University of New York Press, 1983).

have shared fully in the national prosperity rather than struggling to stay even. They estimated that nonagricultural employment would have risen 2.5 to 4 percent instead of declining 1.4 percent. Moreover, the local economy suffered a loss in purchasing power; the retail jobs that supplanted manufacturing jobs in 1977 and 1978 paid less than \$5 per hour on the average, compared to the typical manufacturing wage of \$10 per hour.⁶⁵ The town of Campbell, where the plant was located, experienced a drastic shrinkage of its tax base. Even though property taxes were raised, the town still had to borrow \$750,000 from the State to keep the schoolrooms open.⁶⁶

In January 1980, Youngstown's weakened economy received another shock when U.S. Steel closed its Youngstown works, laying off 13,000 workers. Five and one-half years later, Youngstown had not recovered. In July 1985, the national unemployment rate (civilian, not seasonally adjusted) was 7.3 percent; for Ohio, it was 9.3 percent; and for the Youngstown metropolitan area, 11.3 percent.

⁶⁵*Ibid.*

⁶⁶Ohio AFL-CIO, "Plant Closings in Campbell Force Higher Taxes," *News and Views*, Feb. 29, 1980, cited in Bluestone and Harrison, *op. cit.*, pp. 73-74.

REGIONAL AND OCCUPATIONAL MISMATCHES

The Youngstown experience, indeed the economic state of much of the Northeast-Midwest frostbelt, highlights the importance of local and regional effects in the displacement of workers. While aggregate U.S. employment in the manufacturing industries was roughly unchanged from 1973 to 1980 (at slightly over 20 million workers),⁶⁷ manufacturing jobs dropped 10 to 17 percent in New York, Ohio, and Michigan. New York and Ohio each lost over 150,000 manufacturing jobs; Michigan lost more than 200,000. While some workers relocated to Texas, California, and other growing areas,

⁶⁷U.S. manufacturing employment dropped from 21.0 million in 1979 to 19.4 million in August 1985.

most did not. The consequence of the regional shifts in manufacturing jobs was persistent double-digit unemployment in much of the industrial Northeast.

Nationwide data on plant closings are limited and unsatisfactory (see box 3-A), but the best available information shows a similar but more complex regional picture. It appears that regions winning jobs between 1976 and 1982 had higher rates of job loss from dissolution of businesses than regions where unemployment rose, but the winning regions more than compensated with exceptionally high rates of job generation. The converse was also true. 'As table 3-8 shows, the Middle Atlantic and East

Box 3-1.—Information on Plant Closings

Considering the attention that plant closings attract, solid information on the subject is surprisingly limited. Nationwide data on plant closings have never been compiled systematically.¹ Available estimates, both of the number of plants closed each year and of the number of workers thus displaced, cannot be used with confidence. Some estimates, based on incomplete, anecdotal accounts, are almost certainly too low; others, based on data compiled for other purposes, may err in either direction.

Better statistics about plant closings and mass layoffs should become available in a year or so. The Job Training Partnership Act of 1982 requires the Secretary of Labor to monitor and report annually on plant closings. However, no data were collected until Congress appropriated money specifically for the purpose, \$1 million in fiscal year 1984 and another \$5 million in fiscal year 1985. An eight-State pilot program was begun in 1984, but the Administration proposed to rescind the 1985 appropriation, on the grounds that a plant closing study was unnecessary in a period of economic recovery. Congress did not act on the rescission. Work is now underway to collect data from all 50 States on plant closings and layoffs affecting more than 50 workers; publication is expected in 1986. The U.S. General Accounting Office (GAO) is also conducting a major study of plant closings, to be finished in 1986.

Meanwhile, analysts have resorted to several less complete sources of information to examine plant closing trends.² A few States (e.g., California, Washington, and Massachusetts) have collected information about plant closings within their own borders. Also, some information is available from industry trade associations. The American Iron and Steel Institute, for example, has kept track of closings and partial closings of steel facilities over the last 10 years. The data show that steel producers in the United States closed over 400 facilities between 1974 and 1984, including about 20 entire plants or integrated companies. About a dozen plants or companies were afterwards reopened under different management.

Nationwide estimates do exist, and are generally made in one of two ways:

1. by adding up the number of plant closings reported in the general and trade press; or
2. by developing proxies for plant closings, based on business or employment data collected for other purposes.

Both methods have serious drawbacks.

Estimates based on press accounts are only as complete as their sources. Underestimation is almost inevitable. The largest data bank of press accounts for monitoring plant closings nationwide includes only about 200 publications; and most of the press, whether trade or general, identify only the large or highly publicized plant closings. Surveys of this sort may be used for tracking year-to-year trends, but are not really adequate even for this purpose. Press attention to the subject is likely to be greater in times of intense public concern about plant closings (e.g., during a recession) than during prosperous times.

One well-known survey based on press clippings was done by a private company, the Bureau of National Affairs, in 1982 and 1983.³ Their 1982 survey, based on 124 trade publications, reported 618 permanent or indefinite plant closings, involving the displacement of 215,535 workers (an average of 348 workers per plant). The 1983 survey reported 547 plant closings, with 107,158 workers displaced (a plant average of 196 workers). The large number of workers per plant closing indicates that the survey counted mostly large-scale closings—especially considering that many companies phase

¹The data collected by the Bureau of the Census and analyzed by the Bureau of Labor Statistics on displacement of workers from January 1972 to January 1980 was based on information supplied by 65,000 households and was a measure of plant closings.

²For a concise discussion of these sources, see William B. Evers and Marjorie Jones, "Economic Adjustment Resources" (Washington, DC: Corporation for Enterprise Development, 1983).

³Bureau of National Affairs, *BNA's Employee Relations Weekly*, vol. 2, No. 10, Mar. 12, 1984, pp. 307-310.

down over along time before officially and permanently closing, so that the figures cited for average number of workers displaced are most likely too low. -

Nationwide estimates of plant closings and displaced workers derived from proxy data are much higher than those based on press accounts. Several analysts have based plant-closing estimates on Dun & Bradstreet's market indicator files, which are kept current for over 5 million business establishments (defined as the specific locations where business activities take place). By following changes in the files from year to year, researchers can track the number of business establishments that have opened, closed, or relocated (assuming the establishment keeps its same name and file number); changes in the number of employees at each establishment can also be followed.

The Dun & Bradstreet data are not compiled for the purpose of counting plant closings, and present problems when used for that purpose. For example, multi-establishment firms do not always list all their branches or subsidiaries. If one of these shuts down, the event is not recorded as a plant closing. On the other hand, a merger, acquisition or divestiture of a particular establishment could be recorded as a plant closing, when all that actually happened was a change in plant management. One objective of the GAO study of plant closings is to check the accuracy of the Dun & Bradstreet data as a proxy for a direct count.

Following Dun & Bradstreet data from 1976 to 1982, a recent study sponsored by the U.S. Small Business Administration concluded that 24.8 million jobs were lost during the period in business dissolutions.⁴ Some 16.2 million jobs were lost due to "plant closings," defined as dissolutions of establishments in firms with 100 or more employees. The remainder, 8.6 million jobs lost in dissolutions of smaller firms or branches of firms, was considered "turnover." These figures reflect only jobs lost, not jobs created during the same time. According to the same study, job creation exceeded job losses throughout the period, though just barely in the 2 years from 1980 to 1982.

⁴Candee Harris, "The Magnitude of Job Loss From Plant Closings and the Generation of Replacement Jobs: Some Recent Evidence," *The Annals of the American Academy of Political and Social Science*, vol. 475, September 1984.

Table 3-8.—Employment Loss in Closings and Job Replacement Rates:
All Industries by Region, 1976-82

| Region | Employment loss in closings ^a | | Replacement rates ^c |
|------------------------------|--|----------------------|--------------------------------|
| | Number (in thousands) | Percent ^b | |
| New England | 872 | 28.8 | 1.49 |
| Middle Atlantic | 2,696 | 29.6 | 1.17 |
| East North Central | 3,077 | 29.7 | 1.23 |
| West North Central | 958 | 29.2 | 1.68 |
| South Atlantic | 2,639 | 35.9 | 1.51 |
| East South Central | 947 | 34.0 | 1.29 |
| West South Central | 1,808 | 38.0 | 1.93 |
| Mountain | 688 | 40.2 | 2.15 |
| Pacific | 2,512 | 41.2 | 1.70 |
| U.S. total | 16,177 | 33.4 | 1.50 |

^aClosings in firms with 100 or more employees.

^bEmployment loss as a percentage of 1976 employment.

^cThe replacement rate measures the number of jobs created for each job lost in closings.

SOURCE: Candee Harris, "The Magnitude of Job Loss From Plant Closings and the Generation of Replacement Jobs: Some Recent Evidence," *The Annals of the American Academy of Political and Social Science*, vol. 475, September 1984.

North Central regions lost jobs due to plant closings at rates lower than the national average, but their job replacement rates were even lower. The East South Central region, where the job loss rate was a little above average, also had a poor record in job creation. All three of these regions had large numbers of displaced workers in 1984.

Another source of mismatch between jobless workers and jobs is the shift of manufacturing jobs from the older smokestack industries into faster growing high-technology industries where wages for production (blue-collar) workers are usually lower than the average manufacturing wage.⁶⁸ Many of the jobs that are most visibly declining—e.g., in steelmaking—pay considerably more than the average manufacturing wage. There are **other differences besides the wage gap. Not surprisingly, the proportion of women and nonunionized workers is greater in production jobs in the newer, faster growing high-technology industries.** Altogether, the new jobs being created in manufacturing often do not fit very well with those that are disappearing.

Table 3-9 compares wages for production workers in five manufacturing industries in which overall employment grew 24 percent between 1979 and 1984 with wages in five industries where employment shrank 24 percent during the same time, and is projected to decline further by 1995. In the fast growth industries, wages in July 1985 averaged \$8.19 to \$10.06 per hour; in the slower growth or declining industries, \$10.90 to \$13.82 per hour.

⁶⁸The high-technology sector is defined in various ways. Depending on the definition, employment in the sector varied from 2.5 to 12.6 million in 1980, and increased by 20 to 40 percent from 1972 to 1982. See ch. 4 for further discussion.

The average manufacturing wage at that time was \$9.52 per hour.

High-technology manufacturing industries probably will create no more than a minor share of the new jobs in the U.S. economy in the next 10 or 20 years. The greatest growth will almost certainly come, as it has for the last 40 years, in the service-producing sector of our economy, which now accounts for 72 percent of all U.S. jobs. The shift to the service sector has recently accelerated. From 1960 to 1979, the United States gained some 6 million jobs in the goods-producing sector, of which 4.2 million were in manufacturing; in the same period 29.6 million jobs were added in the service-producing sector.⁶⁹ From 1979 to mid-1985, the Nation lost 1.6 million jobs in manufacturing, while adding 9.6 million in the service industries. Considering that half the 5.1 million workers displaced from their jobs since 1979 were in manufacturing, the extent of the mismatch between the old jobs and the new jobs is evident.

Service sector jobs are not always inferior jobs.⁷⁰ Many low-paying service jobs have re-

⁶⁹*Employment and Earnings*, September 1985, table B-1. The jobs are those of employees on nonagricultural payrolls.

⁷⁰The broadest definition of service sector includes everything but the goods-producing industries (agriculture, mining, construction, and manufacturing). It encompasses transportation, communication, public utilities, wholesale and retail trade, finance, insurance, real estate, other personal and business services, and government. Analyses of jobs in the service sector are usually based on data that classify jobs by industry. Another way of looking at jobs is by occupational category; e.g., "clerical worker," which is essentially the same job in a bank as in an auto assembly plant. The occupational category "service worker" must be distinguished from "workers in the service industries." The occupational category refers to workers such as janitors, cooks, waiters, hotel maids, food service workers, and health service workers. Most of these workers are employed in the service sector, but some are in other sectors such as manufacturing.

Table 3-9.-Average Hourly Earnings of Production Workers in Selected Manufacturing industries, July 1985^a

| Slow growth industries 1979-95 | Average hourly earnings | Fast growth industries 1979-95 | Average hourly earnings |
|---|-------------------------|---|-------------------------|
| Blast furnaces and basic steel products . . | \$13.51 | Office and computing machines | \$9.52 |
| Primary nonferrous metals | 13.82 | Electronic components and accessories . . | 8.28 |
| Nonferrous rolling and drawing | 11.10 | Engineering and scientific instruments . . | 10.06 |
| Motor vehicles and equipment | 13.37 | Measuring and controlling devices | 8.93 |
| Farm machinery and equipment | 10.90 | Medical instruments and supplies | 8.19 |

^aBenefits are not included in earnings figures.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, September 1985, table C-2.

placed still lower paying agricultural and laborer jobs. Also, not all manufacturing jobs are good jobs. For example, the average wage for production workers in apparel in mid-1985 was \$5.69 per hour, compared with \$9.52 for all manufacturing and \$8.54 for the entire private sector. Moreover, the service sector is broad enough to include occupations from corporation lawyer to restaurant dishwasher. Some parts of the service sector—e.g., transportation and public utilities—pay above-average wages to nonsupervisory workers (\$11.38 per hour in 1985). The categories with most employees, however, pay below-average wages (e.g., \$5.92 per hour in retail trade and \$7.86 per hour in the catchall “services” category). Overall, service sector wages—\$7.73 per hour in 1985 for nonsupervisory workers—are substantially lower than the \$9.52 average wage for production workers in manufacturing.⁷¹

⁷¹Data on wages of production workers in manufacturing and service industries are from *Employment and Earnings*, September 1985. The overall service sector wage is a weighted average, calculated from earnings and employment in the various categories of service industries.

According to the Bureau of Labor Statistics, the 10 occupations expected to produce the most new jobs by 1995 are quite traditional ones, all in the service sector, that already account for millions of jobs in our economy.⁷² For at least 5 of the top 10, pay and prestige are low: janitors and cleaners, cashiers, waiters and waitresses, nursing aides and orderlies, and retail salespersons.. Another 2 of the 10—registered nurses and kindergarten and elementary teachers—are jobs held principally by women where mediocre pay often does not match the demanding responsibilities. The other 3 in the top 10—truck drivers, wholesale trade salesworkers, and accountants and auditors—are relatively well-paid jobs often held by men. Only one of these three (truck drivers) is a blue-collar job.⁷³

⁷²U.S. Department of Labor, Bureau of Labor Statistics, “Nine Out of 10 New Jobs Projected to be in Service Industries,” news release, USDL 85-478, Nov. 7, 1985.

⁷³See ch. 4 for further discussion of the jobs being created in the U.S. economy, and the differences in character and pay from the jobs that are disappearing in the restructuring of American industry.

IS THERE A MISSING MIDDLE?

The changing character of jobs in the U.S. economy is one element of the argument, made by some analysts, that the American middle class is eroding.⁷⁴ Displacement of well-paid blue-collar workers from the older, unionized smokestack industries, and replacement of those jobs by jobs paying considerably less, are seen as causes of the “declining middle.” Other analysts see no evidence of any such long-term trend, and believe that if earnings or family incomes did show a tendency to polarize during the last 10 or 15 years (a point on which

there is some disagreement), the main factors were demographic and temporary.⁷⁵

The evidence on whether there has been a shift in earnings away from the middle is conflicting. Lawrence, for example, found that full-time workers earning a “middle-income” wage of \$13,000 to \$26,000 (in 1983 dollars) constituted 50 percent of the work force in 1969 but dropped to 46 percent in 1983, with 3 percent falling into the lower class group and 1 percent rising into the upper class group.⁷⁶

⁷⁴See, for example, Barry Bluestone, “Industrial Dislocation and Its Implications for Public Policy,” paper prepared for the Third Annual Policy Forum on Employability Development, Washington, DC, 1983; Bob Kuttner, “The Declining Middle,” *The Atlantic Monthly*, July 1983; Thomas M. Stanback, Jr., “Work Force Trends,” in National Academy of Engineering, *The Long Term Impact of Technology on Employment and Unemployment* (Washington, DC: National Academy Press, 1983); Lester Thurow, “The Disappearance of the Middle Class,” *The New York Times*, Feb. 5, 1984.

⁷⁵See, for example, Sar Levitan and Peter E. Carlson, “Middle-Class Shrinkage?” *Across the Board*, October 1984; “The Myth of the Vanishing Middle Class,” *Business Week*, July 9, 1984, pp. 83-86; Robert J. Samuelson, “Middle-Class Media Myth,” *National Journal*, Dec. 31, 1983. For a summary of both views, see Victor F. Zonana, “Is the U.S. Middle Class Shrinking Alarmingly? Economists Are Split,” *Wall Street Journal*, June 20, 1984.

⁷⁶Robert Z. Lawrence, “Sectoral Shifts and the Size of the Middle Class,” *The Brookings Review*, Fall 1984. The drop in middle-class earnings was confined to males; 56 percent of male work-

Thurow found the same tendency in household incomes. If a middle-class household is defined as one whose income is between 75 and 125 percent of the median (\$15,000 to \$25,000 in 1982), the middle class shrank from 28.2 percent of households in 1967 to 23.7 percent in 1982. About half of those households changing status fell below the middle class, and half rose above it.⁷⁷ Rosenthal, analyzing pay data for 416 occupations, found no evidence of workers dropping from the middle. He found virtually the same proportion of workers in middle-income occupations (paying about \$14,200 to \$20,000 in 1982) in 1982 as in 1973.⁷⁸ Some of the disagreements in findings among these authors are due to differences in definition of the middle class, or differences in the time period chosen for analysis.

Those who are skeptical that the middle class is shrinking attribute any perceived declines in earnings or family incomes to the entrance of millions of baby boomers into the work force in recent years, thus swelling the ranks of low-income households. Another explanation of apparent shifts in household incomes is the

ers were in the middle range in 1969, 47 percent in 1982, with most of the excess dropping into the lower earnings group. Female workers with middle-class earnings increased from 39 to 44 percent. Lawrence attributed most of the drop in the male worker middle class to entrance of the inexperienced baby boom generation into the job market.

⁷⁷Lester C. Thurow, *op. cit.*

⁷⁸Neal Rosenthal, "The Shrinking Middle Class: Myth or Reality?" *Monthly Labor Review*, March 1985.

increasing number of women in the work force. While women with working husbands and more education boost family incomes, those who are less educated or are single parents add to the number of low-income families.

Some analysts point to several factors that together may be responsible for a decline in the middle class since the end of the 1960s: higher unemployment, more single-person households, more two-earner families, the baby boom effect, and the changing industrial and job structure of the economy.⁷⁹ These analysts do not expect the shrinkage of the middle class to continue, but neither do they think the losses of the past few years will be reversed.

So far, the thesis of the declining middle may be judged not proven (to borrow the noncommittal verdict available to Scottish juries). If the thesis ultimately proves correct, if the technological gains that raise productivity and benefit society, but displace workers, do not come back to enrich and enlarge a middle class of well-paid workers, American society as a whole will be the loser. The healthy market that supports American business could decline, and the optimism and sense of fairness which are the basis for social harmony could be seriously damaged.

⁷⁹McKinley L. Blackburn and David E. Bloom, "What Is Happening to the Middle Class?" *American Demographics*, January 1985.