

INTRODUCTION

Loss of a job through permanent mass layoff or business closure is a fact of life for many American workers. Between January 1979 and January 1984, 11.5 million American workers were displaced because of plant shutdowns and relocations, rising productivity, or shrinking output.⁶ In the 2 years 1983 and 1984, over a million workers lost their jobs due to business closure or permanent mass layoff in establishments with more than 100 employees, according to preliminary results from a recent nationwide survey done by the General Accounting Office.⁷ It is likely that at least as many more were similarly affected in smaller establishments. The GAO survey showed that manufacturing workers were harder hit than workers in service industries, and that the Midwestern and northeastern regions had disproportionate shares of closings and mass layoffs. The survey also showed that large numbers of workers lose their jobs in business closures and permanent mass layoffs even in a period of economic growth and recovery, such as 1983-84, as well as during recessions. Dealing with the consequence—worker displacement—is therefore an ongoing task.

The consequences of involuntary job loss are both painful and long lasting for many displaced workers. Displaced workers are likely to experience prolonged unemployment: one-fourth of all workers displaced between January 1979 and January 1984 were without work for a year or more during the period.^a Most displaced workers do return to work, but the majority take a cut in earnings, either through lower wages or acceptance of part-time employment in place of a full-time job. Many drop out of the labor

force, sometimes after many weeks of discouraging job hunting. Most displaced workers lose benefits; health benefits usually stop with the loss of a job or shortly thereafter, pension benefits suffer, and seniority is usually wiped out.⁹ The economic stresses of displacement also take a toll in mental and physical health. Effective adjustment assistance, helping displaced workers to find or train for new jobs, helps to minimize the costs of displacement.

Advance notice of plant closings and permanent mass layoffs is generally regarded as a valuable tool facilitating worker adjustment. Although advance notice is required in many industrialized nations, the U.S. Government has no such requirements.¹⁰ For over a decade, bills have been introduced in Congress which would mandate advance notice. While none of these bills has been passed, advance notice remains a legislative issue. In late 1985, Representatives Silvio Conte, William Clay, and William Ford¹¹ asked the Office of Technology Assessment to hold a workshop exploring the benefits and costs of advance notice. Senator Orrin Hatch endorsed the request. The requesters asked OTA to examine a number of issues connected with advance notice, including the following:

- How many workers receive advance notice, and what is the extent of notice?
- What are the costs that advance notice requirements would impose on business? Do such costs vary by industry? Are there ways to mitigate such costs?
- Is advance notice effective in triggering efforts to prevent closings and mass layoffs?

⁶Paul O. Flaim and Ellen Sehgal, "Displaced Workers of 1979-83: How Well Have They Fared?" *Monthly Labor Review*, June 1985.

⁷U. S. Congress, General Accounting Office, "GAO's Preliminary Analysis of U.S. Business Closures and Permanent Layoffs During 1983 and 1984," paper for presentation at the OTA-GAO Workshop on Plant Closings, Apr. 30-May 1, 1986.

^aDescriptions of the consequences of displacement are taken from Flaim and Sehgal, *op. cit.*; and from U.S. Congress, Office of Technology Assessment, *Technology and Structural Unemployment: Reemploying Displaced Adults*, OTA-ITE-250 (Washington, DC: U.S. Government Printing Office, February 1986).

⁹In some cases, when displaced workers are transferred to another plant owned by the same company where the layoff occurred, the workers take their seniority rights with them. Often in transfers of this kind, seniority for benefits is retained, but not for order of layoff. Relocation to another company-owned plant is quite infrequent for blue-collar workers.

¹⁰Two States and a few local governments require advance notice. See the section entitled "State and Local Programs."

¹¹Cosponsors of H.R. 1616, a bill requiring 90 days' advance notice of plant closings and mass layoffs. H.R. 1616 was narrowly defeated by the House of Representatives in November 1985. See the section entitled "Legislative Proposals" for a description of H.R. 1616.

- How rapidly can services be delivered to workers following notice of plant closings or mass layoffs? In particular, what is the capacity of public sector programs, such as those established under the Job Training Partnership Act Title III, to respond rapidly with adjustment services?
- To what extent do workers in the so-called “sunrise” industries, or high-tech firms, receive advance notice? What services do workers in such industries typically get?
- What is the experience of U.S.-based businesses with Canadian notice requirements? To what extent is the Canadian system applicable in the United States?
- What other countries require advance notice? How do American businesses cope with such requirements when they operate in those countries?

A workshop was held April 30 and May 1, 1986. The report that follows is based partly on the discussions that took place at the workshop, and also on pertinent literature and research conducted by the Office of Technology Assessment and the General Accounting Office, which cosponsored the workshop. This report focuses quite specifically on the issues of advance notice of and rapid response to plant closings and permanent mass layoffs. OTA previously conducted a much broader assessment of worker displacement, publishing the results in the February 1986 report, *Technology and Structural Unemployment: Reemploying Displaced Adults*. In the earlier report, OTA considered the causes of worker displacement, the effects of displacement on workers and communities, the effectiveness of adjustment programs in helping displaced workers find or train for new jobs, and some of the continuing, long-range efforts needed to avoid displacement—including efforts to improve adult education and training, or to adopt new forms of work organization that are appropriate and effective with advanced computer-based technologies. In addition, in its continuing studies of competitiveness of various U.S. industries, OTA considers effects on jobs and workers as important parts of the assessments.

How Much Notice?

There is broad—though not unanimous—agreement that early action is an important part of assisting displaced workers. Advance notice of plant closings or permanent mass layoffs greatly facilitates an early start. Employers responding to a Conference Board survey noted that “advance notice is beneficial to employees and is an essential element in a plant-closure program.” GAO’S recent survey found that 88 percent of larger establishments provide some kind of notice to at least some of their displaced workers, but many people get little or no specific warning that *their* jobs will be lost.¹³ Thirty percent of employers give no specific notice to individual blue-collar workers that their jobs will be lost, and another 34 percent give 2 weeks or less. The amount of notice that most workers get is 1 to 2 weeks—too little time to provide much in the way of adjustment services to workers by the time layoffs begin.

The GAO survey is a source of new information on how many U.S. employers give notice of plant closings and mass layoffs and how much notice is given. The survey covered the experience of larger establishments (100 or more employees) in 1983 and 1984¹⁴; establishments of this size account for about 44 percent of the U.S. work force. Preliminary results of the GAO survey indicate that the amount of advance notice provided varies a great deal. Twelve percent of establishments reported they gave no notice of any kind to any employees of possible closure or permanent layoff; 30 per-

¹²Ronald E. Berenbeim, *Company Programs To Ease the Impact of Shutdowns*, Conference Board Report No. 878 (New York: The Conference Board, 1986).

¹³U.S. Congress, General Accounting Office, op. cit.

¹⁴The method GAO used in its survey was to select a stratified random sample of 2,400 establishments which appeared, on the basis of Dun & Bradstreet data, to have experienced either a closure or a permanent layoff involving 200 or more employees or, in the case of establishments with fewer than 1,000 employees, 20 percent of the work force. GAO reached by telephone representatives of 90 percent of the 2,400 firms, and identified about 500 that had experienced a closure or a layoff which met the criteria. GAO then distributed a questionnaire to these 500 firms on the amount of advance notice and assistance offered to the workers involved in the closures and layoffs. Preliminary results of the survey cited here are based on a 70 percent response.

cent gave at least some of their workers 1 to 14 days' notice; 40 percent gave 14 to 90 days' notice; and 18 percent gave more than 90 days' notice (table 1).

These figures represent what GAO called "overall" notice, including either general notice—announcements intended to provide workers and communities with some warning without specifying the exact closure date or which workers are to be laid off—or specific notice—which informs individual workers when their jobs will end—or both. General notice can be quite useful in letting workers and communities know that they may be facing job losses, and may be effective in catalyzing adjustment efforts or planning for worker adjustment services. In the case of a plant or business closure, general notice and specific notice often amount to the same thing. However, when mass layoffs but *not* closings are involved, specific notice may be needed before adjustment service delivery can begin; few workers are likely to sign up for services until they know that their jobs will be affected.

Of the two types of notice, general notice was longer than specific notice. Of the establishments surveyed, 18 percent provided more than 3 months' general notice of closing or mass layoff to at least some of their employees; only 9 percent provided more than 3 months' specific

notice. Over half (54 percent) of establishments provided 2 weeks' or less specific notice; 55 percent of establishments provided 2 weeks' or *more* general notice. It appears that the typical establishment with over 100 workers announces that job losses will occur more than 2 weeks before the occurrence, but gives specific notice to individual workers about 1 week in advance to blue-collar workers and 2 weeks in advance to white-collar workers.

The GAO figures are consistent in some ways but dissimilar in others to figures in a recent Conference Board report.¹⁵ The Conference Board, like GAO, reported that about 12 percent of firms gave no advance notice of closure, with some advance notice apparently the norm for larger establishments and firms. However, The Conference Board survey reported substantially longer periods of notice given than did the GAO survey (table 2). Why the difference?

The inconsistencies probably reflect differences in the ways the surveys were conducted and what was asked. GAO's figures are based on a 70 percent response rate; firms that did not at first reply were contacted repeatedly. (GAO's final analysis was not complete at the time of this report; a final response rate near 80 percent is expected.) Also, the firms questioned in the GAO survey were from a strati-

¹⁵ Berenbeim op. cit. p.9

Table 1.—Percent of Establishments Providing Various Lengths of Advance Notice

Days	Percentage of establishments		
	General	Specific	Overall
0	20	23	12
1-14	25	31	30
15-30	19	20	21
31-90	18	17	19
91-180	10	6	9
181 or more	8	3	9

NOTE: The "Overall" category includes all establishments which gave at least some workers the designated amount of notice. Establishments are included in the category which designates the maximum notice to any workers. For example, if an establishment gave 7 days' specific notice and 30 days' general notice, it is included in the "15-30 days" category.

SOURCE: U.S. Congress, General Accounting Office, "GAO's Preliminary Analysis of U.S. Business Closures and Permanent Layoffs During 1983 and 1984," paper for presentation at the OTA-GAO workshop on plant closings, Apr. 30-May 1, 1986.

Table 2.—Amount of Advance Notice Given: Comparison of GAO and Conference Board Figures

Days	Percentage of establishments or companies	
	GAO	Conference Board
0	12	13
1-14	70	41
15-30	9	21
31-90	9	25

NOTE: GAO survey figures are for overall notice, including both general and specific notice. This category designates the maximum amount of general or specific notice establishments give (see explanation of table 1).

SOURCE: U.S. Congress, General Accounting Office, "GAO's Preliminary Analysis of U.S. Business Closures and Permanent Layoffs During 1983 and 1984," paper for presentation at the OTA-GAO workshop on plant closings, Apr. 30-May 1, 1986; and Ronald E. Berenbeim, *company Programs to Ease the Impact of Shutdowns* (New York: The Conference Board, 1986).

fied random sample. Thus, GAO's results are derived from a statistically valid representation of U.S. establishments with 100 or more employees that had plant closings or mass layoffs in the 2 years 1983 and 1984.

The Conference Board figures are based on a 27 percent response to a questionnaire that was mailed to human-resource vice presidents of 1,900 U.S. companies; one followup letter was sent to those that did not reply to the first. The companies selected were the largest (in terms of sales of services or goods) in seven categories of industry: large manufacturing, banking, insurance, retail trade, gas and electric utilities, diversified services, and transportation; the selection was not planned to match the distribution of these kinds of industries in the U.S. economy. Of the 512 companies responding to the questionnaire, 224 reported that they had had at least one closure. Major differences from the GAO survey were the lower response rate (indicating greater self-selection) and the fact that the original sample was not selected to represent U.S. businesses generally. In addition, many of the 224 companies had experienced more than one closing. According to the report's author, the more experience with closing the more notice and service a company is likely to give.¹⁶ The Conference Board figures thus probably represent best practice of large firms,¹⁷ rather than typical practice.

Comprehensive figures derived by statistically valid methods on who gets advance notice and how much notice is given are available only for establishments with 100 or more employees, through the GAO survey. Some good case examples of managing shutdowns are presented in The Conference Board report as well. There is little information, however, on advance notice practices in smaller firms. It is likely that small businesses give less advance notice of layoffs or shutdowns. Small businesses may have a harder time anticipating layoffs and very limited resources to manage work force reductions.

¹⁶Personal communication with Ronald Berenbeim, The Conference Board, June 1986.

¹⁷Respondents to The Conference Board survey were mostly medium-size to large companies; 83 percent had more than 1,000 employees.

Who Gets Notice?

Employers generally give white-collar workers more notice of impending job losses than blue-collar workers; on average, white-collar workers receive 14 days' specific notice of job loss in plant closings or mass layoffs, while blue-collar workers get 7 days' specific notice.¹⁸ Thirty percent of establishments reported they gave no specific notice to blue-collar workers; 26 percent gave none to white-collar workers. Sixty-five percent gave blue-collar workers 2 weeks' or less specific notice, versus 53 percent giving 2 weeks or less to white-collar workers (table 3).

Unions make a difference in the amount of notice workers get. Eighty-four percent of establishments with union workers gave blue-collar workers some amount of general notice; 71 percent of establishments with no union workers gave general notice. Unionized establishments typically gave longer notice; blue-collar workers in establishments with unions got an average of 2 weeks' specific notice, while those in establishments without unions got an average of 2 days' specific notice.

Case Study: Silicon Valley

Information on advance notice by industry is usually not available. For industries with

¹⁸This section is drawn from the GAO study; see U.S. Congress, General Accounting Office, op. cit.

Table 3.—Amount of Advance Notice Establishments Give, By Type of Worker

Days	Percentage of establishments		
	White collar	Blue collar	Overall
0	26	30	23
1-14	28	34	31
15-30	19	16	20
31-90	17	13	17
91-180	7	5	6
181 or more	3	2	3

NOTE: Establishments are included in the "overall" category according to the maximum amount of notice given to any workers. For example, if an establishment gives 7 days' notice to one group of workers and 30 days' notice to another, it is included in the category "1 5-30 days" in the "Overall" column.

SOURCE: U.S. Congress, General Accounting Office, "GAO'S Preliminary Analysis of U.S. Business Closures and Permanent Layoffs During 1963 and 1964," paper for presentation at the OTA-GAO workshop on plant closings, Apr. 30-May 1, 1966.

large or industrywide unions, collective bargaining contracts are an indicator of how much notice is given. Union membership is declining, however, and now represents less than 20 percent of the work force. One of the purposes of the workshop was to find out more about how growing industrial and service sectors—most of which are not heavily unionized—handle mass layoffs and closings. To provide some information, OTA did a small case study on worker displacement in California's Santa Clara County, a center of the computer and semiconductor industries,

Up until the mid-1980s, both industries experienced rapid employment growth. Between 1977 and 1984, U.S. semiconductor industry employment increased by slightly more than 9 percent per year, while computer industry employment rose even faster, at nearly 10 percent per year. Since early 1985, however, both industries have faced difficulties stemming from import competition and leveling or falling demand. Employment in both industries has declined. In the semiconductor industry, employment in June 1986 was at mid-1984 levels, having fallen by about 21,000 since its peak in January 1985. In the computer industry, employment had fallen by over 50,000 since the 1985 peak.

Falling employment has meant widespread layoffs in the high-tech industries of Silicon Valley. However, layoffs are associated not only with employment decline; between 1979 and 1984, when California's high-tech industries added 322,000 jobs, layoffs in high-tech industries numbered 177,000. According to Philip Shapira, who has made a study of displacement and industrial restructuring in California, workers

from high-tech industries "experienced a significantly longer median period of unemployment than basic industry workers." Part of the reason, according to Shapira, is that high-tech workers are less likely to have received advance notice of layoffs than basic industry workers. Shapira's analysis of the Bureau of Labor Statistics' data shows that 54 percent of California's displaced workers "received advance notice or expected layoff" (the survey question was phrased in this way). But only 45 percent of California's high-tech workers received advance notice or expected to be laid off.

Shapira's findings for California high-tech workers are in line with the findings of the case study of advance notice and adjustment services in Santa Clara County commissioned by OTA. Interviews with workers, company spokesmen, employment experts, and industry experts in California found that laid-off workers in Silicon Valley typically get little or no advance notice, a small amount of severance pay (about 2 weeks), and minimal or no help in finding a new job.²⁰ In part, this may reflect the fact that many high-tech firms in Silicon Valley are relatively small, with limited ability to anticipate future conditions or to withstand even short business downturns without cutting costs. Andrew Johnson, of the Electronics Association of California, cites the example of a company that makes machines in which semiconductor chips are baked. The firm, with annual revenues of about \$20 million and 160 to 170 employees, competes with at least three similar small companies and several much larger companies. One of its machines costs \$950,000, "When a couple of the company's customers back off from previously stated intentions to buy one of these machines or actually cancels an order, it makes a substantial impact on the company's financial status. The company's abil-

¹⁹ These figures come from an analysis of a Bureau of Labor Statistics survey of worker displacement over the period from January 1979 to January 1984. These data, along with additional information on plant closings and layoffs in the State of California, were analyzed by Philip Shapira, a doctoral candidate at the University of California, Berkeley. The high-tech industries analyzed included a number of sectors besides the computer and semiconductor industries, which accounted for 30 percent of California's high-tech employment in 1984. See Philip Shapira, "Industry and Jobs in Transition: A Study of Industrial Restructuring and Worker Displacement in California," unpublished draft doctoral dissertation, Department of City and Regional Planning, University of California, Berkeley, 1986.

²⁰ David Sheridan, "Worker Displacement in the California High-Tech Industry: A Report to the Office of Technology Assessment," contractor report prepared for the Office of Technology Assessment, May 1986. A case study of job security in Massachusetts high-tech industries had similar findings. Of 23 firms studied, there was "no evidence of any firm giving more than one day notice to affected employees." See The High Tech Research Group, "Whatever Happened to Job Security? The 1985 Slow Down in the Massachusetts High Tech Industry," January 1986.

ity to predict accurately, say, six months ahead of time how many employees it will need is not very good.

Small firms may indeed have special difficulties anticipating cutbacks. However, thousands of the layoffs in Silicon Valley occurred in medium-size and larger firms, and many of these firms also laid people off without notice. In 1983, the Atari computer and video games subsidiary of Warner Communications terminated nearly 600 employees with no prior warning. According to newspaper accounts, the workers were called off their jobs, informed that they were no longer needed, and immediately escorted out of the plant by security guards. Intel, a company with 21,500 employees in 1984, laid off 2,000 employees in 1985 and 1986, and gave no notice. Intel did provide employees with severance pay and opened a placement center to help its laid-off workers find jobs. Several other large or medium-sized high-tech companies also dismissed workers without advance notice in 1986.²³

Another likely reason for limited or no notice in Silicon Valley is that almost none of the high-tech firms there are unionized, and establishments with unions are more likely to give advance notice than those without.

While the general picture in Silicon Valley is of workers receiving little or no advance notice, there are important exceptions.²⁴ Apple Computer, Inc., decided that it had to close down three of its less-automated microcom-

puter plants during the personal computer glut in early 1985. The 750 permanent employees who worked at these three plants—one in Mill Street, Ireland, one in Garden Grove, California, and one in Dallas, Texas—received 2 to 3 months' advance notice of their layoffs, and help from what turned out to be an exceptionally successful outplacement center.²⁵ These cuts, however, were not enough; Apple was in deeper trouble than initially thought. A few months later, Apple laid off an additional 450 permanent employees throughout the company, most of whom received 2 weeks' advance notice. All of them, however, even those just hired, received at least 6 weeks' severance pay, and were given first crack at jobs when Apple began hiring again.

Notably, some Silicon Valley companies were able to survive the downturn without layoffs. Advanced Micro Devices, Inc. (AMD), like other semiconductor firms, showed net losses in quarterly reports during the downturn, and sales dropped 50 percent between December 1984 and December 1985. AMD had a company policy of no layoffs, handed down by its CEO Jerry Sanders, who had been fired by another high-tech company years before. AMD avoided layoffs by cutting executive and professional salaries 10 to 15 percent, deferring all pay increases, and freezing hiring. AMD did shed about 1,000 workers through attrition, but nobody was laid off involuntarily throughout 1985.²⁶

Another way Silicon Valley companies avoid layoffs is through the employment of part-time and temporary workers. The use of temporary employees is an increasingly prominent feature of Santa Clara County's high-tech industries. Nationwide, 1 of every 165 workers is a temporary; in Silicon Valley the ratio is 1 in 60,

²¹Sheridan, *op. cit.*, pp. 26-27.

²²Daniel A. Beucke, "The Ax Falls in Silicon Valley," *San Jose Mercury*, Mar. 28, 1983; "Atari Ex-Employees Sue, Charging Firm Concealed Layoff Plan," *Wall Street Journal*, Aug. 16, 1983; Tamar Lewin, "Workers' Rights in a Closing Tested," *New York Times*, July 19, 1984. In the Atari case, an out-of-court settlement was subsequently reached in 1986 in which 535 workers laid off without notice each received \$1,119 from the company. The payment represented the average salary of the workers for 4 weeks.

²³See for example Carrie Dolan, "High-Tech Concerns Sudden Fall Leaves Small Town With Problems and Questions," *Wall Street Journal*, Feb. 22, 1984; Mary A. C. Fallen and Ray Alvarez-torres, "Out of Work—Overnight: In this Valley, Pink Slips Often Come With No Notice," *San Jose Mercury*, June 16, 1986; Karen Southwick, "The Rush To Push Fired Workers Out the Door," *San Francisco Chronicle*, June 16, 1986; see the section entitled "Response to Advance Notice" for discussion of employer-provided services to displaced workers.

²⁴The following examples are from Sheridan, *op. cit.*

²⁵Some 1,500 temporary employees who were also let go received no notice or severance benefits. See the following discussion of temporary employees in Silicon Valley.

²⁶In August 1986, after continued financial losses, Advanced Micro Devices announced the dismissal of 200 employees with less than 1 year on the job—the company's first dismissals in a decade. At the same time, AMD rescinded its no-layoff policy for employees with more than 1 year of service. See Brenton R. Schendler, "Semiconductor Indicator Fell Again in July," *Wall Street Journal*, Aug. 13, 1986.

and the number is growing. According to an official in the San Jose office of California's Employment Development Department, the use of temporaries is "one of the most striking trends in the Silicon Valley work force since 1980."²⁷ The temporary agencies fill all kinds of jobs, from software designer to quality control inspector to word processor or assembler.

To employers, the advantages of temporary workers are that they can be quickly hired and fired, without advance notice or severance benefits; they often do not get other costly benefits; and they can provide a buffer for companies that want stable employment policies for their regular employees. The disadvantages of having too many temporaries are that they can hardly develop a sense of company pride or camaraderie, and any training they get is lost when they leave. From the employees' point of view, freelance work can be highly rewarding if one has skills that are in demand—in software design, for example. For workers in the much more numerous, less skilled jobs—such as assembling circuit boards, stocking shelves, or cleaning out chemical tanks—intermittent jobs and pay can make for a precarious existence. The San Jose *Mercury News* calls these temporaries "migrant electronic workers."

At least one company (Intel) is creating a "flexible work force program," in an effort to overcome the drawbacks of employing temporaries. The flexible workers must agree that they can be called on to work as much as 40 hours a week or as little as none. It is expected that they will average 20 to 25 hours a week, and they will receive partial benefits. The company

²⁷Interview with Rica Pirani, San Jose office, California Employment Development Department, Apr. 28, 1986, reported in Sheridan, op. cit.

²⁸Sheridan, op. cit.

anticipates that most of these jobs will be filled by women who do not want to work full time because they have children at home.

Company practices in Silicon Valley are diverse, but there is something of an industry norm. Although some companies provide advance notice; most provide little or none. Some companies provide worker adjustment and outplacement services, but most workers do not receive such services, either from their companies or from government programs.

Companies that provide notice and services generally do so because advance notice is seen as good for business and community goodwill. According to The Conference Board:

Company managers responsible for closure believe that advance notice, combined with generous severance plans, reduces pressure and anxiety, generates good will, and contributes to improved productivity.

Jay Elliott, Apple's Vice President for Human Resources, puts it this way:

Talent is a strategic consideration in the electronics business. People aren't interchangeable parts like in the old smokestack industries where machines were basically more important than people. We don't go out, hire someone, hand him a lug-wrench, and tell him to screw bolts all day. You have to value people and their input . . . Frankly, when we laid people off last year, we were as concerned about the impact on the people who weren't laid off as much as on those who were. If you don't treat the people who are being laid off with dignity—share the responsibility for finding another good job—then it sends a message to the employees still with you that they are expendable.³⁰

²⁹Berenbeim, op. cit., pp. 7-8.

³⁰Sheridan, op. cit., p. 11.