## INDUSTRIAL EFFORTS

## Last Hired, First Fired? Minorities Retreat in Defense

Three years ago, electronics engineer Jerry L. Bobo took a promising new job at TRW Inc., a large defense contractor. He became part of a design team charged with developing satellite technology for military communication in the event of nuclear war. The Los Angeles-based team consisted of 55 people; Bobo, who is black, was one of four minority members.

But 14 months later, in 1991, the threat of full-scale nuclear war had faded as the Soviet Union disintegrated, the Pentagon cut its budget, and TRW sliced its staff by 10%. Bobo and several others in his group lost their jobs.

TRW wasn't laying off blacks in particular. But Bobo was a casualty of an ageold business practice that always seems to hit minorities and women hardest: Last hired, first fired. As one of the newest recruits on the team, Bobo was simply first in the line of fire. Bobo, now working for a small minority-owned defense company, sums up the logic that led to his dismissal: "When the time comes for cutbacks, these

large contractors start chopping from the bottom, and that's where you'll find most minorities because they are often the last hired."

Most defense industry executives grimly acknowledge that the drastic shrinkage of their business, coupled with a tradition of seniority-based protection against layoffs, have stalled their efforts to attract and keep minority scientists and engineers. A substantial number of these minority workers were hired during the defense industry heydays of the late 1980s, so they were more vulnerable to layoffs than the white males who had been working there for several decades.

"Your minority recruitment programs can't help but be affected when you are in a business in decline," said Bonnie Soodik, vice president and general manager for the McDonnell Douglas Corp., the nation's largest military contractor. A recent analysis of Equal Employment Opportunity Commission records, done by the Wall Street Journal, bears her out. It found that blacks suffered disproportionate job loss at several major defense contractors in the 1990-91 recession. And the National Association for the Advancement of Colored People (NAACP) has singled out Hughes Aircraft Co. for charges of violating government diversity guidelines; Former Hughes employees have sued the company for racial discrimination. "With such large numbers of people being let go at these defense contractors, we are very concerned about what impact the layoffs will have on their efforts to diversify," says W. Gregory Wims, head of the NAACP's federal task force.

Yet some companies, such as McDonnell Douglas, Lockheed Corp., and even TRW, have managed to protect many of their minority hires. Their strategy: Toss out the sacred cow of seniority, and wield the budget axe with an eye to ethnic diversity, as well as business needs. "There's a recognition that diversity is not only a social imperative but a business imperative as well," says William Fried, executive vice president at Bectel Co. and chairman of the National Council for Minorities in Engineering (NACME), which is funded by high-tech companies. Such companies continue to support minority programs in schools, hoping to reap their investment in job applicants when times are better.

Most defense contractors didn't begin to recruit minorities aggressively until the 1980s, when government prodding and demographic realities prompted an allout effort, say NACME officials. Companies sponsored science and engineering programs at high schools and even elementary schools. They gave minority students

scholarships for college and graduate work. And most important, they canvassed universities for promising minority candidates, and hired them.

Then came the end of the cold war. Government spending for military supplies—everything from army boots to aircraft carriers—plunged from a high of \$206 billion in 1987 to \$161 billion in 1992, according to the Defense Budget Project, an independent analysis group based in Washington. That translated into the loss of more than 350,000 jobs in the defense industry and, says Betty Vetter, executive director of the Washington-based Commission on Professionals in Science and Technology, "Women and minorities are

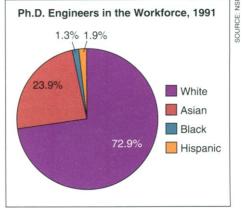
feeling a greater brunt of the downsizing than people who have been in industry longer—mainly white males."

For instance, at Martin Marietta this year, minorities in the professional ranks took a slightly harder hit than whites: Minorities are 9.5% of professionals, but account for 11% of layoffs this year, according to company data. And among the spate of lawsuits accompanying the industry-wide layoffs is one charging racial discrimination, brought against Hughes by former engineer Gregory Duane, who lost his job in a major cut in 1991. But Hughes defends its policies, saying that although individual minority group members were let go—as were whites—its workforce remains 9.1% black, 10.5% Asian-American, and 10.1% Hispanic. The NAACP disputes Hughes' numbers, and says it has

received scores of calls from current and former Hughes employees who accuse the company of discrimination on the job.

Yet other companies insist they've found ways to stem their losses of minorities—and many are making good on their promises, says Fried. "Most companies are taking steps to ensure that diversity is not put on the back burner because of budget cuts...I see defense contractors doing the right thing."

Some companies explicitly consider minority status when planning layoffs. For example, McDonnell Douglas typically retains employees based on seniority and skills needed Despite drastic cutbacks, some high-tech defense companies try to keep minorities on board.



Tiny piece of the pie. Underrepresented minorities are vanishingly scarce in engineering.



Budget-cut casualty. Engineer Jerry Bobo lost his job.

by the company. But officials also check to see if slated layoffs hit minorities especially hard; if so, some minorities are retained—even if they have low seniority.

That strategy works: From 1991 to 1993, about onethird of the professional and technical workers at Mc-Donnell Douglas lost their jobs or retired early, as the number shriveled from 109,123 to 74,000. But the company doled out the pain to all ethnic groups. In 1991, for example, 4.4% of the company's professional employees and 11.9% of its technical employees were black; today, those figures are 4.5% and 11.1%, respectively.

Of course, saving one job means losing another, and preventing one type of discrimination opens companies up to charges of fostering another type. McDonnell-Douglas now faces several age discrimination suits from employees over age 55 who lost their jobs in massive layoffs; the company recently agreed to settle a batch of these suits, for a total of \$20 million.

But while some businesses have managed to hold onto their minority workers, the centerpiece of most companies' diversity programs was until recently the recruitment of new employees from schools, and the money crunch has undeniably gutted those efforts. Although contractors are still required to make a "good faith effort" in recruiting minorities, the government allows plenty of leeway in times of crisis—such as funding high school educational programs instead of making new hires, says Thomas Williams, solicitor general at the Labor Department.

Yet companies say they still seek minority candidates for the handful of new job openings. For example, Martin Marietta hired nine new college graduates in technical fields so far this year, including two minority members. That record compares with 14 minority hires out of a total of 128 new employees in the past 2 years.

So despite the drastic downsizing in high-tech industries, workforce analysts say that the gains of the 1980s are not likely to be wiped out. "Most companies will continue their efforts to diversify," predicts sociologist of science Sheila Tobias. "But only at a slower pace."

-Calvin Sims

Calvin Sims is a business and technology writer for The New York Times.

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## Minority Networks Forge Bonds in Chemistry

Jesse Hipps, a black industrial chemist at E.I. Du Pont de Nemours & Co., has a tale to tell about why minorities are so rare in industrial chemistry—and how to solve the problem. Back in the 1980s, Hipps noted that the small Ohio firm he worked for had 12 or so white interns —but no minorities. The personnel manager said there were no minority chemistry students to be found. But within 2 months Hipps had brought the manager to a meeting of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE). The contacts they made led to the hiring of two talented black chemists. "It is amazing how important a black network is," says Hipps.

Indeed, minority scientists say such networks are

Ph.D. Chemists in the Workforce, 1991 1.5% 1.8% White Asian Black Black Hispanic

Rare elements. Minority chemists are still scarce in the workforce.

playing a vital role in diversifying industrial chemistry, which—like most scientific professions—is filled with white faces. About 40% of the industrial R&D workforce consists of chemists and chemical engineers, according to the latest survey by the Industrial Research Institute. But very few of these are underrepresented minorities (see chart).

These days, companies have slacked off on their minority recruiting efforts because there are so few jobs, so networks such as NOBCChE try to keep up the momentum of minority recruitment. Their aim is to get minority students into, and through, the educational pipeline. They mentor students, offer scholarships, hold job fairs, and provide advice all along the way.

Take the case of Tommie L. Royster, a black chemist at Eastman Kodak Co., who got his job after meeting Robert Young, now director of diversity initiatives for Kodak's imaging group, at a NOBCChE meeting in 1987. But NOBCChE helped even after Royster got the job. When he first began work, he was worried about co-workers who thought he'd been hired solely because he was black. "These are the kind of experiences that I couldn't talk about with people at Kodak, but I could share with the people at NOBCChE," says Royster. "Just having people to talk to about these issues helps."

Experiences like Royster's show that recruitment programs are not always enough to ease a minority Ph.D. into the overwhelmingly white corporate world. Although big companies like Kodak and Proctor & Gamble long ago established minority programs, "success" in hiring usually means that major divisions have moved from having no minority chemists to having one or a few. "It's like changing the course of a river by throwing in one stone at a time," says Young.

Networks such as NOBCChE, now 2000 strong, are trying to connect those individual stones together. The 20-year-old Society for the Advancement of Chicano and Native American Scientists (SACNAS), is another minority organization in which chemists are wellrepresented, and the 15-year-old American Indian Science and Engineering Society (AISES), has expanded to more than 1400 members (see p. tk).

Their efforts continue to pay off, says Dick Pierce, educational program director for AISES, citing improved college graduation rates for AISES student members. Moreover, he says, since AISES began, more than 1000 American Indian scientists have gotten jobs in industry via contacts made at their annual meetings. When it comes to adding color to chemistry, minority networks can make a big difference.

-Karen Fox

With reporting by Ivan Amato.