DOING COMPANY SCIENCE

Climbing the Industry Career Ladder

David Snediker recalls graduating from college in 1965—when a young Ph.D., he says, could "get a job doing research until you dropped dead" in academia or at big industry research houses such as Bell Labs and IBM Central Research. But industry's halcyon days are gone, and corporate labs are retrenching. The upshot, says Snediker, now vice president for quality at Battelle Memorial Institute, is that "the kind of person industry will be looking for is not necessarily the academic type"—the lone wolf pursuing knowledge for its own sake. Battelle and many other firms want young Ph.D.s "with some training in 'people skills,'" Snediker says. Scientist-managers, that is. "Essentially, we're looking for people who know how a company runs."

Not that corporate America has to woo young scientists. In a time when academic jobs seem hard to come by, more Ph.D.s are looking for industrial positions. According to the National Research Council, the number of jobs for Ph.D. scientists and engineers in industry rose by 18% between 1987 and 1991, even as similar jobs in academia rose by 7% (see chart). But these jobs are hotly contested; the job-seeking population has also bloomed.

In this buyers' market, corporate recruiters have become extra picky about the kinds of skills they're looking for. For instance, although industry prizes generalists highly, larger firms tend to seek out scientists with specific skills for an immediate project who then can be retooled for future projects. "Large companies are starting to take a narrow view of 'We want this kind of specialist; we can't justify hiring someone without this or that specific skill,'" says Linda Custer, a biochemical engineer at W. R. Grace in Columbia, Maryland. "You should read the job descriptions we write these days. They go on and on for pages."

Custer says she got her job because of her thesis work on cell bioreactors, a topic of immediate interest at Grace. But the company was buying more than her specialty. "My boss said he didn't have any trouble with the decision [to hire me] because I was flexible enough to do other positions," she says.

Industry career path. Once you're in, where can you go? That depends on the size of your company. Large firms often have a bifurcating career ladder that allows scientists to choose between the bench and management. Prakash Malla, a materials chemist at Thiele Kaolin Co. in Sandersville, Georgia, says a typical research track at his 550-person firm goes from research scientist, to senior research scientist, to master scientist, to research associate. With each promotion comes more autonomy in deciding the course of one's research, he says. But as in academia, promotions at Thiele Kaolin don't necessarily entail extra management tasks. Research scientists supervise about five staffers, following a course plotted by master scientists, research associates, and management. Once a research associate, though, a scientist becomes their own boss.

Jumping to the managerial ladder often means more money, but not necessarily more prestige, says Jim Chittick, director of human resources at Dow Corning. He says Dow tries to make research and managerial career paths equally attractive. But among scientists, there is still some stigma associated with leaving research, says Snediker: "You're often viewed by your peers as not having the technical horsepower." At small companies the line between research and management blurs. "Often there's no way to predict a career track," says William Checovich, a biochemist at PanVera in Madison, Wisconsin, which employs 18 people—many of whom must "wear 10 different hats. Right now promotion means added responsibility. Who knows what it will mean 5 or 10 years from now?"

Getting promoted. When promotions are handed out, the ability to be a team player and a good communicator counts for a great deal. "The number of publications is not nearly as important as leadership in the company," Snediker says. And such intangibles weigh heavily in importance as a career progresses. "The higher you go, the greater the expectations are and the more creative you'll be expected to be," says Chittick. PanVera's Checovich adds that "promotion for scientists seems to be tied to crossover skills"—capabilities in nonresearch areas such as regulatory affairs, patent issues, and marketing. These come in handy when scientists represent the company in negotiations with other firms over joint ventures. "If you're not crossing over, you're going to stay at the bench," Checovich says.

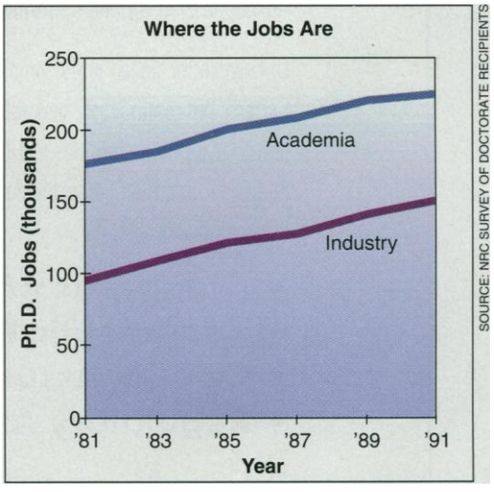
Getting ahead in a company can be rather different from the path of academic promotion.

But scientific work has to be up to snuff, too. Sometimes industry still measures people with the academic yardstick. "For NASA contractors, it seems that the almighty publication list is a strong index for promotion," says Eric Schmidt, an atmospheric scientist at Lockheed Engineering & Science Co. in Hampton, Virginia.

Crossover dreams. With crossovers between industry and academia becoming more common, many industrial scientists see their jobs as an interlude between academic stints. "The oil business is shrinking, and at the moment it appears very difficult to hang on to a job around here once you are over 50 and not in management," says a geologist recently hired by Amoco Production Co. in Houston. Therefore, his plans are to "keep my options open, keep publishing, and work towards a return to academia in 5 or 10 years."

Still, no matter where they end up working, many scientists say they hope to always retain the applied-research feel they developed in industry. "I like industry because I know that something I do now will be relevant," says Joanne Woestman, a physicist at the Ford Motor Company Scientific Research Laboratory in Dearborn, Michigan. "Even if I went back to academia, I would still do applied research."

–Richard Stone



Gaining ground. Ph.D. job growth in industry slightly outpaced academia between 1987 and 1991.