

LOOKING FOR WORK

Unemployment Blues: A Report From the Field

Job-hunting is rarely a picnic, but physical scientists nowadays use terms like “bleak” and “horrific” to describe how they see their chances in today’s job market and what it feels like being in it. Unlike other areas of science, such as biology, the employment picture for chemists and physicists is weaker than it has been in 20 years. With two to three times as many physics and chemistry PhDs in the job market as there are traditional jobs (according to the Washington, D.C.-based Commission on Professionals in Science and Technology), applicants feel ignored and degraded.

That is the message from a survey conducted last year of scientists who applied—unsuccessfully—for jobs in academia. The scientist-as-applicant has been little studied, largely because this status has been considered temporary. The survey was unconventional in that six departments of physics and chemistry cooperated by sending the authors’ questionnaire to all of their failed applicants, and in that the survey solicited and got open-ended responses, including long letters.

The authors—Sheila Tobias, a consultant to Research Corporation; Daryl Chubin, a science education and policy analyst; and Kevin Aylesworth, a young (former) physicist and founder of the Young Scientists Network—queried hundreds of physical scientists who applied for jobs in the 1992–93 academic year about their experiences in the great job hunt. Of the 268 who returned usable responses, all were under the age of 45; 17% were female. The average amount of time spent job-hunting was 18 months. One third had been looking for a job in science for more than 2 years; about two thirds were still looking at the time of the survey.

Reality bites. These scientists have been stunned and disillusioned by the new realities. Many had been stars in school, and although many were in their 30s, they had never before been “rejected” in an academic setting. “I am disillusioned, disenchanted, and genuinely discouraged,” wrote one atmospheric physicist.

Our respondents seemed to feel blindsided by the system. One wrote that they seem to be valued only as “lab rats” to ensure “the continued success of older, established PhDs.” In a buyers’ market, they have found that employers are looking for near-perfect candidates to fill their openings. A poor cover letter or lack of connections can ruin their chances.

“We attempt to stay afloat from year to year, moving from postdoc to postdoc,” wrote one 30-year-old physicist, referring to the current population of perennial scientific wallflowers. “Every fall we send out applica-

tions for faculty positions to any places that advertise....As the years progress, it becomes more difficult for us to maintain our status as postdocs because we age both chronologically and professionally. If we do not obtain faculty positions after a certain length of time (I would estimate 6–8 years as the absolute maximum), we are generally considered to be too old to be hired.”

Asked to reconstruct the search process and recall its impact on their lives, many expressed bitterness and fear. One 30-year-old theoretical condensed matter physicist, who had been looking for 9 months, described “a horrifying realization that I might have spent seven years in graduate school for nothing.” Some informants were taken by surprise by the politics of job-hunting, discovering, for the first time, that connections to high-profile research institutions and senior professionals matter. It’s “who you know,” a degree from a “name school,” the backing of a “mighty professor,” these scientists repeatedly said. “Had I known the power of elitism in this process,” reported a 32-year old-physicist, “I would have made some sacrifices earlier to go to a top school.” While some white males thought

affirmative action programs were to blame for their problems, women seemed to have similar frustrations. One 33-year-old female astronomer complained that the job search “relies too much on contacts and personal impressions [of the interviewer].” A male condensed matter physicist complained that there was “too much focus on who was working on the ‘hot topic of the week’...on who was ‘out there’ [doing hot things] and who was not.”

Scientists were particularly irritated at not being told what

disqualified them for a position. Rejection letters are usually nonspecific, and many failed applicants reported that officials refused, even when asked, to let them know where they stood. Inevitably, then, failed applicants would come away confused about what a hiring department “really wanted.” Said one chemist: “I felt like a baseline measuring device at some interviews. I was there for comparison sake only.”

And while departments claimed to want teaching skills as well as research abilities, one respondent wrote: “Many ‘big U’ departments don’t really care about teaching and want grant-getters only.” As a result, some respondents felt that interviewers tended to pigeonhole the candidates as either researchers or teachers—usually preferring the former. “Even where teaching is favored, there is scanty objective evidence sought of teaching ability,” wrote one puzzled and frustrated nuclear physicist. He wrote that while hiring committees asked to see sample lectures, they would not “engage in dialog about teaching”—which left the respondent to figure out for herself how important teaching really was to that institution.

Oblivious faculty. Our respondents were also surprised to find that the senior faculty members that interviewed them for jobs were often, as one wrote, “unaware of the magnitude of the [employment] problem.” In defense of those doing the hiring, Brian

The scientist-as-job-seeker has been little studied. This survey focuses on the roadblocks in academia.

“What currently are your dominant feelings about your job search?”

Mixed emotions	48%
Despair	27%
Satisfaction with the process	12%
Other	13%

Responses in survey of 264 physical scientists



Schwartz of the American Physical Society points out that a department may be inundated with 400 applications for a position that might have drawn two dozen as recently as 5 years ago. Some of this growth is due to the resumé inflation made possible by word processing, notes Schwartz. But hiring committees, mindful of affirmative action goals, are also casting their nets wider. Some departments have tried valiantly to keep up with the influx. Two years ago, at Macalester College in St. Paul, Minnesota, every member of the search committee for a position in physical chemistry read every one of the 150 applications. But chair Wayne Wolsey predicts that they won't be able to do that this coming year for a position in organic chemistry—there will simply be too many applicants.

Aside from the fact that they are being inundated, another reason departments are being noncommittal in their rejection letters is that they want to keep their options open. Despite the competition, hotshots are still getting multiple offers, so departments have to

anticipate turn downs and don't want to have to call up people who were previously told they were unqualified. Anthony Starace, chair of the physics department at the University of Nebraska, adds that "fear of legal action" is another reason for uninformative rejections. And, although many good people are turned down simply because a more suitable candidate has been found, Starace says many employers prefer not to tell an applicant anything "pejorative."

Whatever the reason, no news is not good news, and it only adds to the stress and anger of frustrated applicants. No wonder so many of our respondents question whether the work they trained for really exists.

—Sheila Tobias

Sheila Tobias is a writer based in Arizona. Adapted from a chapter, "Report from the Field: The Scientist as Applicant" from a book, Science as a Career: Perceptions and Realities, by Sheila Tobias, Daryl Chubin, and Kevin Aylesworth, to be published in January 1995 by Research Corporation.

A Quick Guide to Job-Hunting

Unemployment, in some respects, is particularly perilous for scientists. Re-entry into the job market for a researcher may be difficult. Ask John Quackenbush, who got his Ph.D. in theoretical physics from the University of California, Los Angeles, in 1990 and spent 2 years job-hunting before he finally ended up in computational biology. "Who's going to offer me a job in physics? I haven't published anything in 2 years," he says. And even if a scientist has no trouble keeping up with his field, says chemist Attila Pavlath of the U.S. Department of Agriculture in Albany, California, a board member of the American Chemical Society, "the prospective employer [often] feels that if someone couldn't get a job for a year or two he probably isn't worth it."

Re-entry problems can be even worse if a job loss hits during midcareer. Senior researchers, seemingly a valuable commodity in the job marketplace, can be seen not as a goldmine of experience, but simply as overpriced. Take Douglas Collins, a 54-year-old crystallographer whose contract at the Office of Naval Research has dried up. Potential employers have told him they're looking for an "entry-level" worker.

Not every field has been hit as hard as the physical sciences, of course, but biologists and others are also finding their job-hunting skills put to the test these days. "Good people continue to get good academic jobs," says neurobiologist Zach Hall, the new head of the National Institute on Neurological Diseases and Stroke. But "it takes a little longer now."

What is an unemployed scientist to do? Experts say the best job-hunting strategy is the most clichéd, the most tried and true, but the one a lot of scientists still fail to do: Call people up, ask for names of other people to call up, and call them up. In short—network. Scott Davis of Lee Hecht Harrison in Hartford, Connecticut, a job-placement company, says the scientists he works

with are notoriously shy about this, but there is no substitute for the strategy. Davis also advises job seekers to get constant feedback on their plans and to pick the brains of anyone who will sit down with them. This kind of thing "is something [scientists] have never learned," says Davis. "They need to learn how to be extroverts."

Neuropharmacologist Duncan Taylor, age 45, who was laid off last year after 15 years at Bristol-Myers Squibb, is one of those who went to Davis for counseling. He says he learned that "you can keep up a dialogue" while waiting to hear from a potential employer by—for example—sending her an article about a subject of relevance to the company, with a cover letter. This keeps you, and your application, in the forefront of a potential employer's mind. Taylor landed another job, as research director for a small pharmaceutical company in Pennsylvania, this summer.

Lawyer and engineer Fred Dorey, president of the Bay Area Bioscience Center, which acts as a job broker for biological scientists, has another piece of advice for industry job seekers: Find a core piece of research that you are knowledgeable about, and "go up the citation tree" to find out which scientists are involved in the research. Then call up their companies. And, says Dorey, "Don't call the human-resources director, who may not have a clue what they are looking for. The right person to go to is the scientist."

Sometimes, however, finding a job in science requires more drastic action: switching fields, as Quackenbush did. That's the route Charlotte Hammond, age 41, an assistant professor of molecular biology at Wesleyan University in Connecticut, is considering. Hammond, who failed to get tenure last fall, is determined to stay in science, but if she doesn't find a job within a year, she plans to enter either law school or medical school. If Hammond goes the legal route, she hopes to become a patent lawyer for a biotech firm; if she pursues medicine, she plans to return to research as an M.D./Ph.D. Either road would be long, but Hammond says she finds them attractive because neither would take her far from scientific work.

—Constance Holden



MARC LIEBERMAN

"Who's going to offer me a job in physics? I haven't published anything in 2 years"

—John Quackenbush