

effect whose consequences for the breeder are still unclear. An even more significant influence on capital costs of the LMFBR's may be the design changes contemplated by the AEC. According to the assumptions on which the cost-benefit analysis was based, the first commercial LMFBR's in 1986 will follow a relatively conservative design; 4 years later, in 1990, advanced

LMFBR's of a much more ambitious design are to be introduced. This advanced LMFBR design is, Cochran believes, overly optimistic and quite possibly unrealizable for safety reasons, despite improvements in the technology to be expected by 1990. The high temperatures at which, in the postulated design, the advanced LMFBR's would be operated—close to the melting point

of the fuel—leaves little margin for error in the event of temperature variations, and for this and other reasons the predicted performance may be hard to achieve. But despite the ambitious design, the cost-benefit study does not allow for any increase in capital costs or first-of-a-kind expenses with the advanced LMFBR. The net effect, Cochran asserts, may be capital costs for the

Job Market Rallies a Bit for June Graduates

The employment outlook for this June's newly sprouted scientists and engineers is slightly better than it was last year, but nothing to do handsprings about. Although it is too early to identify specific trends, professional associations and university placement officers feel the market has "bottomed out." "Cautious" is the word most commonly used to describe this year's potential employers.

Students who 3 years ago could have had several would-be employers in industry dangling now find themselves in the unpleasant position of being dangled. Companies that in the late 1960's would make several offers per opening to accommodate a high rejection rate are now making offers one by one, demanding a fast decision, and then moving on, if necessary, to the next candidate.

Employers are still interested only in the cream of the crop. Good students from top schools may get more offers per capita than they did last year, but the marginal students must exercise diligence in order to avoid being plowed under. A few years ago, as one placement officer said, "all you needed was a warm body, a reasonable pulse rate, and a degree" to get a job. Now the ugly reality—that no one is indispensable, not even a scientist—that stunned many last year is beginning to bear in.

Job placements this year have gotten off to a late start, primarily because of the uncertainties caused by President Nixon's economic freeze, which threw employers' projected hiring plans to the winds. University officials say January was the all-time worst month for job seekers, which put December graduates at a disadvantage. Placements have picked up following clarification of Phase II policies, particularly in the last few weeks.

Industry jobs, closely tied as they are to the economy, are becoming available faster than those with the government or in academia. But even fewer company recruiters have hit the campuses this year than last. This, say the placement officers, is because visiting arrangements are usually made a year in advance. Many came last year just to cultivate relationships in hopes that the slump was temporary, but decided to limit their travels this spring.

As for chemistry and physics, the two hardest-hit groups in science, things are not much better than last year. Physicists, whose ranks were bloated for years by the torrents of money going into space and defense research, are finding that adaptation is the key to survival. According to a spokeswoman for the American Institute

of Physics, the most remarkable change in the circumstances of these princes of science has been their own attitude. Many are dropping the cherished ideal of a cosy, tenured niche in academia and are seeking new avenues to professional fulfillment. "Some physicists are looking at other jobs (i.e., industry), and some of them are even finding them interesting," she says.

Much has been sung and spoken about the reorientation of basic research and its applications to benefit the environment, but, as a Georgia Tech placement officer points out, this involves in large part the redirection of scientists already in the market, not an increase in the demand for them. No one fancies that the money devoted to the environment could possibly approach the proportion of the national budget that went into defense and space during the 1960's. So most people are resigned to the prospect that the market for scientists will continue to be depressed for the rest of this decade.

On the other side of the coin is the fact that enrollments in physics, chemistry, and engineering courses have started to decline. Physics enrollments have gone down from junior-senior totals of 14,678 in 1968-69, to 12,755 in 1971-72. The number of Ph.D. physicists has remained static from 1971 to this spring. One American Institute of Physics projection has it that the annual output of B.S. physicists, which was down to 5300 this year, may go as low as 1100 before the decade is out.

As for engineers, Betty Vetter of the Scientific Manpower Commission predicts that there will be a shortage by 1980. As Vetter points out, students now entering (or choosing not to enter) science courses are reacting to the job situation as it is now, rather than to what it will be when they have completed their educations.

Beginning salaries this year are creeping up at last year's rate, or about 2 percent. (In the late 1960's, the annual increase was 5 to 6 percent.) Still, they are far above opening salaries for graduates in the humanities and social sciences, where new bachelor's degree holders may expect to begin at about \$682 a month. According to the Scientific Manpower Commission's surveys, top opening salaries for all fields are commanded by bachelors in chemical engineering, where the average is \$929 a month; M.B.A.'s with a technical undergraduate degree, who are getting \$1089 per month; and the electrical engineer with a Ph.D., whose average beginning salary this year is \$1372 per month.

—CONSTANCE HOLDEN