

McCarthy Takes Lead in Lining Up Support of Scientists

A board of 17 scientists has been formed to advise Senator Eugene J. McCarthy (D-Minnesota) on the scientific and technical aspects of public issues. The board includes five Nobel Prize winners; several scientists who have held prominent posts under the Eisenhower, Kennedy, or Johnson administrations; and three men who were active in organizing the 1964 Scientists and Engineers for the Johnson-Humphrey movement but who have since switched to McCarthy.

Announcement of the advisory board last week, coupled with the earlier organization of an active Scientists and Engineers for McCarthy citizen group, puts the Minnesota Democrat well ahead of other Democratic and Republican presidential aspirants in the race to tap the scientific community for ideas and support. On the Republican side, neither Richard Nixon nor Nelson Rockefeller has a formal scientific advisory board or a citizen group of scientists. On the Democratic side, Senator Robert F. Kennedy's strategists have decided not to activate a "scientists and engineers" group in competition with McCarthy's because such a move "would not be conducive to harmony in the scientific community" and because they hope to inherit most of McCarthy's supporters "after McCarthy withdraws from the race." The Kennedy forces say they do have groups of scientists preparing policy ideas in California, Massachusetts, and the Washington, D.C., area. Meanwhile, supporters of Vice President Hubert H. Humphrey have concluded it would be futile to organize a "scientists for Humphrey" group because McCarthy sentiment is running so strongly on the nation's campuses. "Physical scientists for Humphrey are conspicuous by their absence," comments one key Humphrey adviser.

Perhaps the most politically prominent scientist on Mc-

Carthy's advisory board is George B. Kistiakowsky, professor of chemistry at Harvard, who served as full-time science adviser to President Eisenhower for 2 years, was on the founding committee of the 1964 Scientists and Engineers for Johnson movement, and is currently vice president of the National Academy of Sciences. Two other founding members of the 1964 Johnson-Humphrey support group have also joined McCarthy's advisory board. They are Nobel laureate Owen Chamberlain, professor of physics at Berkeley; and Paul Dudley White, the prominent Boston physician who treated President Eisenhower after his heart attack.*

In a related movement, James Longcope, national coordinator of Scientists and Engineers for McCarthy, said the organization had more than 5000 members as of last week, including 12 Nobel laureates and more than 115 members of the National Academies of Science and Engineering. He said it had raised some \$10,000 for McCarthy, had placed ads in leading publications, and had financed transportation for student volunteers.—P.M.B.

* The remaining members of McCarthy's advisory board include: Leon Eisenberg, professor of psychiatry at Harvard Medical School and head of psychiatry at Massachusetts General Hospital; Bernard Feld, professor of physics at M.I.T.; Frank Furstenberg, Baltimore physician; Jesse Greenstein, professor of astrophysics at Caltech; Arthur Kornberg, executive head and professor of biochemistry at Stanford and a Nobel laureate; Aihud Pevsner, professor of physics at Johns Hopkins; Nobelist Edward M. Purcell, Harvard physicist and former member of the President's Science Advisory Committee (PSAC); Bruno Rossi, professor of physics at M.I.T.; Ascher Shapiro, head of the department of mechanical engineering at M.I.T.; Maurice Visscher, head of physiology at the University of Minnesota; George Wald, professor of biology at Harvard and a Nobel laureate; James D. Watson, also a professor of biology at Harvard and a Nobel laureate; Herbert F. York, professor of physics at the University of California at San Diego, former director of defense research and engineering in the Pentagon and former member of PSAC; and Jerrold R. Zacharias, professor of physics at M.I.T. and former member of PSAC.

The government is trying to compensate for this pervasive lack of interest (and for its own past stinginess—another important factor in the lag) by allocating increasingly large sums toward industrial R & D. The effort has just begun; last year the Ministry of Commerce and Industry raised its industrial R & D grants from practically nothing to the equivalent of about \$2.8 million, and there should be another sizable increase in the coming year. This support bodes well for the future of new firms, but past neglect means that Israel does not have great numbers of scientists and engineers with industrial experience.

Not surprisingly, therefore, new companies are experiencing personnel problems. They demand technical men who are also aggressive and pragmatic—who have, in short, the elusive quality of a genuine "entrepreneur." These men are in short supply, and one of the central problems for a foreign firm

wanting to locate here is that of finding a capable man to run the local plant.

By far the most vexing problem, however, is marketing. Israel's physical separation from the two major markets, Europe and America, deprives new firms of constant interplay with potential customers; without these contacts, there is difficulty in finding places to unload existing products and, more important, difficulty in discovering what new demands will be.

Once science-oriented industry begins to expand, it is also likely to experience growing pains. The first signs of such pains have already appeared: there is a shortage of qualified electronics engineers, largely attributable to the industry's growth and the economy's recovery after the Six Day War. One way to fill these gaps is to lure Israelis home who have gone abroad; there are supposedly several hundred to several thousand Israeli engineers and scientists working outside the country, and the

greatest incentive for them to return is said to be a challenging job. The government is also being urged to expand scientific training. Both of these approaches take time.

In the past few months, science-based industry has received an enormous amount of publicity here. It is easy to lose perspective. Will science-oriented firms solve Israel's basic economic problems tomorrow, next year, or even 5 years from now? Probably not. They represent a minute part of the gross national product (probably less than 1 percent), and even rapid expansion will keep them small in comparison with the whole. Over the next decade or so, Israel will have to rely on older products: cut diamonds (the largest export), citrus fruits (the second-largest), food-stuffs, and a growing tourist trade. But it is clear that science-based industry will play an increasingly important role in Israel's economy.

—ROBERT J. SAMUELSON