year. One sees none of the give-and-take, letters-to-the-editor, and so forth of Sweden and Italy, and there is no "Young Turks" movement of scientists as in Switzerland and Denmark. While the Plan may not be entirely responsible for this, perhaps partly it is.

There are two other points where Quinn's emphasis was perhaps misplaced. He says that the mechanism for planning in France "militates against unwise [governmental] decisions which might draw unwarranted technical support or investment into certain politically popular fields despite overwhelming costs to other more important sectors." Actually, nearly the reverse can be the case, as De Gaulle's "force de frappe" illustrates, for this has rather considerably drained funds from other sciences. Quinn might reply that space, military, and atomic-energy research are not included in the Plan, which is true. But then can it be called consensus planning of science when over 70 percent of governmental science support is not included?

Elsewhere Quinn quotes a French industrialist's praise of the Plan, as far as private initiative is concerned, as follows: "The Plan does not tell a private research organization what to do. Nor does it tell a company what it is to sell. . . . The government will not contribute monies to private companies' research efforts. And industry would not follow the Plan into areas which did not interest it." The Fifth Plan intends to correct this. It provides (for the first time) $120 million for loans to private industry for research, the loans to be repaid only if the research results in revenues for the economy; it urges its governmental science agencies to use private industrial research by contracts when appropriate; and one of its *actions concertées* in biomedicine is in the field of "biologic and medical engineering" in order to attract more engineers and physicists to biological problems and strengthen the French instrumentation industry. These are, no doubt, laudable innovations, and certainly the government will use the program to help industrial research with the same objective skill and imagination which characterizes British and Swedish management of their somewhat analogous instruments. Nevertheless, the Plan does give the government additional tools for persuading private industry.

In short, however intellectually attractive planning is in France, both in its development and in its execution, the Plan provides the government with methods of suasion over the economy which are not commonly found in many other countries. But in France, several social and economic sectors are conspicuously lagging as compared with neighboring countries. (The Délégation Générale quite frankly exposed the retardation in biomedical research in France in *Le Progrès Scientifique* No. 83, April 1965.) Under these circumstances, perhaps France needs both the psychology of consensus planning and a rather tight governmental control over what is planned.

Nevertheless Quinn has performed a service in bringing our attention to methods of science planning in other countries.

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Drafting of Ph.D. Candidates

Qualified graduate students working on their doctorates in science and engineering—at Columbia, New York University, and other universities—are now being called for induction into the military service. Near the culmination of their 20 or more years of formal training they are being drafted to fill local quotas. This is a poor utilization of scarce and nationally needed talent and is certainly not in the best interest of our country, yet the scientific community has not raised its voice in audible protest. The National Science Foundation, the National Aeronautics and Space Administration, and the National Academy of Sciences have developed strong financial support for graduate education in the sciences, yet all agencies are strangely silent while some of our brightest young men have their careers interrupted at a crucial time in their training.

It is time for the agencies within and outside the government which represent the scientific community to speak out, loudly and clearly, against this. Failure to do so will cost our country dearly in the future, for all the battles are not being fought in Southeast Asia. Our future scientific strength resides with the young Ph.D.'s, and drafting them to fight, or idly pass the time as former generations of soldiers have done, is to ignore history and misinterpret the meaning of democracy.

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