

In The Name of Science

by H. L. Nieburg
 Quadrangle Books\$7.95

*Reviewed by Joel N. Franklin,
 professor of applied science*

This book is a violent, opinionated, reckless diatribe against science, industry, and military research and development. Nieburg is an associate professor of political science at the University of Wisconsin. His book is full of grave charges—seldom new, but all sensational. I am reviewing this book because it has become famous and, therefore, dangerous. Representative Henry S. Reuss, chairman of the House Subcommittee on Research and Technical Programs, is quoted on the jacket of the book as follows: "These charges deserve most serious and earnest consideration by the Congress as well as the executive branch of the government."

Really, we at Caltech should not complain. Nieburg writes favorably of DuBridge, Pickering, Caltech, and JPL. Nieburg also praises Secretary McNamara and government laboratories and universities.

The villains in Nieburg's book are James Webb, the director of NASA, and industrialists like Simon Ramo. Among numerous atrocities of which Webb is accused is "the crippling of the Jet Propulsion Laboratory." Dr. Ramo is pilloried for having gotten rich by serving his country.

Not even Nieburg doubts the alertness, initiative, and competence of Simon Ramo and Dean Wooldrige. In the 1950's these two men did more than any other industrialists to protect the free world from the growing missile power of the Soviet Union. They and a few men like them have preserved our civilization and our lives. Should we honor them less because they did not make their fortunes selling cars or cigarettes?

Nieburg's section on, "The JPL Story," is full of colorful errors. With patience and restraint, Dr. Pickering explained to me that Webb has done much to facilitate the work of JPL. JPL has *not* been crippled, nor has it become a business office doing

no technical work of its own. General Luedecke was *not* hired by Webb; he was hired by Pickering. There are many other errors, but the whole book is not about JPL.

According to Nieburg, prime contracting as administered by NASA is a racket. The prime contractors are pictured as being so carefully shielded by the government that they inevitably make unearned billions. This "big lie" is exposed by the present financial distress of the Douglas Aircraft Company, which holds many prime contracts for NASA. The fact is that the competition for prime contracts is "vicious," to use the word of JPL's Eberhardt Rechtin. He gave me as an example the intense competition for the Apollo contract.

Nieburg speaks much ill of the Communications Satellite Corporation and of the supersonic transport project. His main criticism is that the government is spending too much money subsidizing private industry.

Not everything that Nieburg writes is misleading or false. It would be impossible to write a 431-page book that contained no truth. The research and development necessary for our defense comprise a big, complex, novel enterprise. Some mismanagement has been inevitable. Mismanagement of research and development should be investigated, and it *has* been investigated again and again by all three branches of the government. One should not criticize Nieburg's book because it contains unpleasant charges. But the charges are not new, and many of them are false.

Nieburg blames science for almost everything, including water pollution. On page 91 we read, "A honeymoon at Niagara Falls no longer evokes the lyricism of love but, with its unsightly sewage and noxious odors, the realities of married life." In a chapter inscrutably titled "Entropy and Pump-Priming" science is also blamed for air pollution. In fact, if our scientific knowledge were fully applied, we could greatly *reduce* air pollution.

One of Nieburg's main points is that more work should be done by government and university laboratories and less by private industry.

Actually, more work should be done by both. We do not want a great government bureaucracy controlling production. Moreover, an advanced laboratory like JPL does not want to do production. After the laboratory has made new developments and after the laboratory and the government have decided policy, the laboratory is delighted to delegate the huge, vexing, mundane chores of production to private industry. Nor should private industry be prevented from doing research. Who has not marveled at the achievements of the Bell Telephone Laboratories? If the transistor is a result of "the economics of ambiguity," then we had better vote for ambiguity.

No brief review could fully catalog the delights and challenges of Nieburg's book. If you are a scientist, an engineer, or an executive, you should read it. As a group, they are said to be inarticulate. If we who understand science, engineering, or business firsthand decline to enter the great debates, we shall all be ruled by the Nieburgs in the end.



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