

The professor in government: an interview with Robert Morse

Not by coincidence is Robert W. Morse both Assistant Secretary of the Navy for Research and Development and President of the Acoustical Society of America. Morse, a former physics professor and dean, has enjoyed a long association with the Navy, first as a sailor and later as an underwater-sound expert. We interviewed him recently to learn about two aspects of his job: its impact on his professional goals and what it has taught him about science-government relations.

Morse's first naval duty, shortly after graduation from Bowdoin College, was as an officer for three years

Johnson named him Assistant Secretary of the Navy in June 1964.

A fellow of the American Physical Society and former head of the APS solid-state-physics division, Morse is well known in research for his ultrasonic-attenuation studies of Fermi surfaces in metals. He has also served frequently as a Navy consultant on underwater sound and antisubmarine warfare and was chairman of the NAS Undersea Warfare Committee. Morse, who will be 45 next month, lives in Arlington, Virginia, with his wife, son and daughter. Another son, formerly a student at Harvard, is now in the Marines.

When we entered his office, which is decorated with Navy emblems and a large portrait of President Kennedy, Morse was speaking on the telephone about the well developed art of naval guns. Five bells sounded, for 10:30 a.m., as he put down the phone. To open the interview, we remarked:

• *It certainly is a long way from Fermi surfaces to naval guns and missile-defense systems. What were some of the factors that influenced your decision to accept this post?*

"My downfall (I suppose you'd call it that) began when I became involved in administrative things at Brown, first as chairman of the physics department and then as dean of the college. Of course, I've had a long association with the Navy for most of my adult life. When they offered me this post it was irresistible. I saw it as a unique opportunity to participate in interesting and crucial developments."

• *What are some of the more striking things about the change from academic to government environments?*

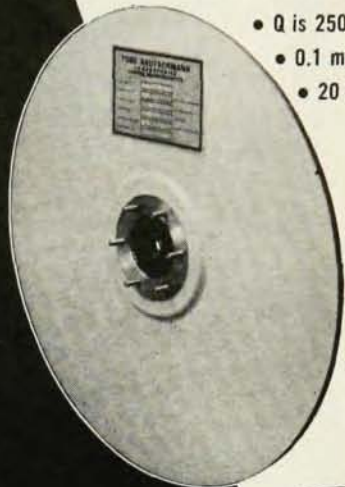
"Surprisingly enough, things didn't seem to change an awful lot. For instance, both the Navy and the university are institutions more than businesses. They both have internal sets of goals and standards. The big change, of course, is the size of the operation I'm involved in now, which is almost impossible to imagine. There are a great many people speaking different languages, and each is convinced by different arguments that a given ap-



MORSE

during World War II. After the war he did graduate work at Brown University and received his PhD there in 1949 with a thesis based on configurational dispersion of ultrasonic waves in metals. Morse joined the Brown physics department immediately afterward, was named full professor in 1958 and served as chairman from 1960 to 1962. Then he was made dean of the college, an appointment he held until President

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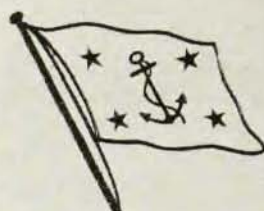
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proach is correct. Military, industry, science and government all converge with each issue, and this is what creates many of the problems."

An important difference. "One of the important things I had to realize in this job was that I had to stop being a physicist and had to go far beyond the attitudes, interests and values that would be appropriate for dealing with physics. The most effective scientists in government are those



who realize the difference between being a scientist and a government administrator. They possess a completely different range of responsibility."

• *What are some of the greatest satisfactions of your job?*

"Seeing how the government is run; how conscientiously all important issues are dealt with. From academic life one inherits an attitude that government is unimaginative, that it is sluggish and an enemy of progress, or that Congress is unreasonable. This just is not true. I found not only many competent and dedicated officers and civilians in the so-called 'bureaucracies' but I also soon recognized that Congress is very well informed about government-science relations."

A constant challenge. "A further satisfaction of mine is the constant challenge I face. One is always caught in a situation where the number of jobs to do far exceeds one's ability to do them. I have to sort out what I want to concentrate on in order to make any kind of impression on such a large and fast-moving set of problems."

• *Will you return to academic life when you leave government service?*

"This worries me very much. No matter how long you're away from it, you can never give up the feeling that you're basically a professor and a physicist. It's also clear to me that I can't make a career out of the way of life I have now. Of course, many people

tell me that it's a great experience, but I don't know what it's applicable to—other than the Pentagon!"

• *Do you think you'll be able to take up with your research again?*

"That's a tougher one. I certainly wouldn't want to be a professor without an active involvement in physics research. I hope it's a matter of getting decompressed. The problem is to readjust sufficiently so that you're carrying your own weight once again and being productive scientifically. It's hard enough, however, to compete in physics when you're young and putting all your energy into it. It can't be a part-time job. In many ways it's an even more consuming job than this one, because research is more of an internal than external process. In the present situation I'm always forced to react so that my choice is limited in deciding what to do, and how much initiative I can take. This is not so in research."

• *Do you believe there are too many restrictions on the policy initiatives of scientists in government?*

"Not at all. In fact I am more concerned that because of a particular specialization, and because scientific problems are closely related to larger social issues, scientists will wrongly identify the solution of these issues with science itself. You have to step aside from your role as a scientist in viewing these matters. Indeed, I'm very concerned that the scientists in the next decade may lose their influence on policy matters entirely to a non-technical class of administrators—a highly competent and analytical group who will take a broader view than scientists of the overall social problems of the country."

Wide range of problems. "There is no question but that the next decade requires a broader application of science and technology than we have seen in the past. There is a wide range of problems, from the use of natural resources to pollution and mass transportation, that have never really been attacked successfully and consistently by science. Such problems are the real challenges of the next decade and we must mobilize scientific research to attack them. We've got to find new ways for reducing and analyzing public purposes into manageable prob-

lems that science can address."

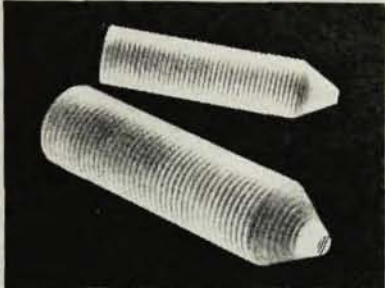
● *Do you think the recent investigations by Congress are indicative of Congressional concern over the growing power of the scientific establishment?*

"Oh, definitely. I think there is complete consensus in Congress that science is extremely important to the public welfare. But Congress and the public are concerned that the money we spend to support science should be expended sensibly as measured by public objectives. Here is where scientists must face the fact that the public cares what science is doing; we must recognize that how much money is spent and how it is spent are not scientific questions. As nice as it would be for scientists to make all the decisions in this matter, in my mind it would be extremely unwise from the public point of view. Furthermore, I believe the scientist would really not know how to decide properly in these matters when acting in the role of scientist."

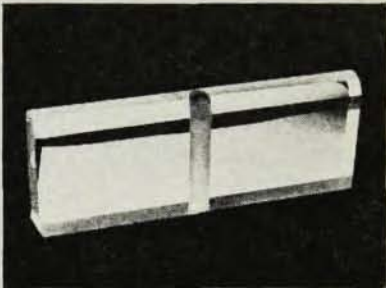
Exciting but frustrating. A typical week for Morse shows him involved in a wide range of activities, from discussing with Jacques Piccard plans for a new deep-submergence vehicle to testifying before the House Armed Services Committee. Three of his five lunches are weekly luncheons with, respectively, the Navy Under Secretary, Department of Defense R&D representatives and the Navy Secretary. In the week we examined, Morse also attended a luncheon at the National Academy of Sciences that followed presentation of the National Medals of Science. His day at the Pentagon starts at 8 a.m. and ends between 7 and 8 p.m. It includes such activities as meeting with defense contractors, working out programs in naval communications, studying aircraft budgets, attending intelligence briefings and analyzing reorganization plans and Navy security problems.

Morse remarked, as we were leaving his office, "There's too much for any one man to do here. But the nature of the job is such that you can't possibly avoid trying. It's frustrating in a certain sense but that's what provides the excitement. And as a matter of fact one can also say that for research."

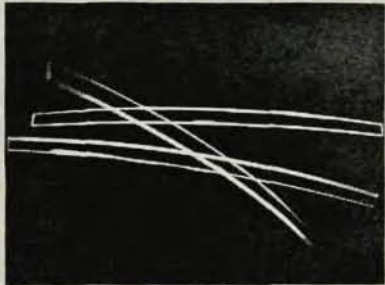
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