

SCIENCE AND POLICY, AND THE ACOUSTICAL SOCIETY OF AMERICA

Charles Schmid¹

Why should acousticians in America be concerned about how the U.S. government proposes and approves science policy? First of all, funding follows policy. More to the point, substitute “Research and Development (R&D) dollars” for “science policy,” and insert acronyms such as NIH, NIDCD, ONR, NSF, NOAA, NASA, EPA, USGS, NIST, DOE and DOD² for “government.” Most of our readers will be familiar with these government organizations as they provide all or part of their funding. I am cognizant as well of this connection since ASA’s satellite meetings are often supported by some of these agencies.

According to Dahlia Sokolov (see her article beginning on page 8), the total R&D budget for the current fiscal year is \$148 billion, of which \$66 billion is non-defense. How are these funds authorized and allocated by the 535 members of Congress? Before thinking about an answer, please note that only about 5% of the Senate and 15% of the House members have degrees in science, engineering, or the health sciences. As Dahlia points out, most legislators don’t prioritize science above their other concerns and interests, nor have many developed a basic scientific literacy. An extreme case was often mentioned in speeches to technical audiences by the Congressman for whom I served as a Congressional Science and Engineering Fellow 25 years ago. After hearing a scientist testify before a House Committee on a Northwest Power Bill, he recalled that a fellow congressman from California questioned the witness on power transfer between California and the Northwest. The scientist replied that: “We’d like to do that Congressman, but first we’d have to repeal the second law of thermodynamics.” As the hearing ended, the congressman turned to an aide, and was overheard asking whether an amendment repealing the second law of thermodynamics could be drafted in time for the next hearing.

We are fortunate that the Congressional Science and Engineering program, administered by the American Association for the Advancement of Science (AAAS), prepares and helps place scientists and engineers in congressional offices and committees so they can provide advice on science policy. This is the main reason that ASA has partnered with the American Institute of Physics (AIP) to support a Fellow each year. Jeffrey Fox, the AIP/ASA Congressional Fellow for 2009-10, gives an excellent account of his experiences as a Fellow beginning on page 25. There are Fellows in other branches of the government as well, including the executive branch, such as the U.S. State Department. Read about Steve Garrett’s experience as a recent Jefferson Science Fellow starting on page 14. (Editors note—*Acoustics Today* thanks Steve for his excellent job of organizing this special issue.)

The Fellows work to improve two important aspects of science policy which both Dahlia and Jeffrey describe in their

articles. One is the need to create policy which advances science and the well-being of citizens; the other is to provide the science which will lead to sound policy. The ASA’s work on classroom acoustics provides an excellent example of how ASA’s Standards Division, working with members of the ASA and government, has made good use of both approaches. It all began when a mother notified the American Disabilities Act (ADA) Access Board that she had noticed children with hearing disabilities having trouble hearing—and thus learning—in a classroom with high noise levels and high reverberation. Members of the Society were tasked to provide the justification for setting a standard for classroom design and construction (ANSI/ASA S12.60). The existence of this standard has encouraged school designers (we hope with the advice of acousticians) to provide quieter, less reverberant classrooms, with air conditioning and other building systems specified to meet the standard. The Society and its members can justifiably be proud of contributing to better learning environments for all children. But as ASA Standards staff and members will tell you, it took a lot of advocacy, which continues today.

The Acoustical Society has also begun a new program for getting young people interested in acoustics. The first phase has involved creating posters on optics and acoustics in five languages (the need to promote science is without borders). You will be hearing more about this endeavor soon. The Acoustical Society often joins the AIP and its nine other member societies in writing letters to Congress advocating important science, technology, engineering, and mathematics (STEM) policies. Dahlia has many suggestions how ASA members can support science policy, noting that the key point she makes in her article is that “scientists have to speak to be heard.” This was echoed by Jeffrey Fox, who states “how important it is for scientists and engineers to engage in policy.” There are a number of ways that ASA members in the U.S. can become involved in science policy. One is simply by contacting their Senator or Congressional Representative. In addition, ASA members in the U.S. can apply to serve as a Congressional Science and Engineering Fellow or a State Department Fellow. But you don’t have to go to Washington DC. You can join ASA’s Panel on Public Policy (POPP) or work on local issues. Greg Swift’s article on defending K-12 science education standards in New Mexico beginning on page 34 provides an excellent example, and a good story, on how to affect science where you live.

Returning to the point that good science depends on financial support—ASA members who receive support for their research and development at universities, labs and companies could occasionally express appreciation to their organization’s leadership who speak up for strong policy and funding for the science of acoustics at the national, state, and local levels.

References

- ¹ Charles Schmid is the Executive Director of the Acoustical Society of America and was the ASA Congressional Science and Engineering Fellow in 1985/86
- ² National Institutes of Health, National Institute of Deafness and other Communication Disorders, Office of Naval

Research, National Science Foundation, National Oceanic and Atmospheric Administration, National Aeronautics and Space Administration, Environmental Protection Agency, United States Geologic Survey, National Institute of Standards and Technology, Department of Energy, and Department of Defense.

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