

Policy, Polemics, Platitudes, Parenthood, and Preaching to the Choir [All Meant in the Best Possible Way]

Elton N. Kaufmann

Vannevar Bush's post-WWII report, *Science—the Endless Frontier*, is fast becoming *science—the endless debate*. The report was mentioned by every other speaker, at least it seemed so, at a recent, hastily orchestrated conclave of some of the most prominent science and technology policy leaders in the United States. The assembly was billed as a "Forum on Science in the National Interest: World Leadership in Basic Science, Mathematics, and Engineering." The Office of Science and Technology Policy's (OSTP) associate director for science, M.R.C. Greenwood and her small but energetic staff put together the two-day assembly at the National Academies' Washington, DC facilities on January 31 and February 1. As reported in *Science* (January 14, p. 165), the forum's ostensible purpose was to help OSTP develop for basic research a "blueprint" analogous to the one laid out for technology policy by the President and Vice President in February 1993.

On the agenda in one form or another I found all the components one would expect to comprise such a policy: education and training (human resource pools and their diversity, the research experience, public awareness); the research portfolio (federal priorities, industrial research, defense-civilian balance, international cooperation); the research infrastructure (universities, federal laboratories); technology transfer; and even the social science of science itself.

Well over 100 science and policy leaders at the fully subscribed forum had been asked in advance to submit brief white papers on these themes. The product of this somewhat innovative call will presumably be folded into the policy formulation process at OSTP.

The event's most heartening aspect was concentrated high-level attention to the science policy dilemma. The meeting attracted speeches from Vice President Al

Gore; Senators Barbara Mikulski, Jay Rockefeller, and Tom Harkin; and Congressman George Brown. In addition to the appearance of these powerful figures in science policy and funding, a surprising array of high-level individuals *spent the full two days in active attendance*. These included Jack Gibbons (director of OSTP), D. Allan Bromley (former director of OSTP), Neal Lane (director of NSF) and several NSF assistant directors, Harold Varmus (director of NIH), Robert White and Bruce Alberts (presidents of the National Academies of Engineering and Science, respectively), and also several high ranking officials from NASA and the U.S. Departments of Energy, Defense, and Commerce.

Although the rhetoric was that of the 1990s rather than of Vannevar Bush's era, only a few themes, all as familiar as Bush's, echoed in both initial pronouncements and ultimate conclusions. This, despite two days mulling over a plethora of complex interrelated science and technology topics. Simply stated, the meeting circled around two nearly axiomatic tenets ("parenthood statements"): (A) Science is good as seen from just about any angle, and (B) its environment is changing in ways that severely stress the research enterprise.

Naturally, several equally predictable corollary ideas flowed from these generalities. For example, the premier U.S. science enterprise needs to contribute more efficiently to national needs; universities and federal labs need to be better utilized and evaluated; the shift from military to civilian R&D needs to be managed; the

U.S. must renew its reputation as a reliable partner in international collaborations; and only an educated public can reverse anti-science sentiments.

I have not a shred of doubt about the earnestness of OSTP officials and of all the meeting participants (including me) as we discussed the nuances of the issues. The rather cynical title to the left reflects my own impatience with a process I have continued to watch and repeatedly participate in. It seems to rehash the same issues *ad infinitum* without a lot of added value on each go-around.

To be sure, philosophical consensus on central themes such as those just alluded to was easily achieved (again). This was not matched by unanimity on how to prioritize and implement programs to support or redress them. Would one expect any other result when the deeply entrenched institutional cultures of major R&D players come face-to-face with the prospect of change?

The science press reports newsworthy "sound bites" that play to the fear of change. *Science* (February 4, 1994, p. 604) essentially distilled the event into two remarks by Senator Mikulski, one conciliatory—"strategic research was never meant to be a straitjacket," and one threatening—"maybe it's time to reorganize (NSF)." Of course, it is hard to mine news from generic statements of conventional (for the R&D community) wisdom, but the event deserves coverage, if only because it focused a welcome high-level spotlight on a dilemma we have all been struggling with for some time.

Notwithstanding my "*deja vu* all over again" analysis of the proceedings, these topics are too important to science and to the country to not participate fully in whatever chances for discourse arise. So, as the current young Administration gets its science and technology "sea legs," perhaps a more charitable perspective is warranted. Although the assembly was hardly a plebiscite, I was impressed by how broadly advice was sought and how seriously it is being taken. Words of those we might have typed as "relevance-hawks" were not just conciliatory, but also betrayed a real appreciation for the fundamental nature of science and the way it must be practiced. Call me gullible, but it seems that science has many hard-nosed practical allies. They can't erase the inevitable dislocations from the "tectonic shift" in our environment, as one speaker put it, but they can help protect the essence of the enterprise from uninformed budget slashing and micromanagement. We can help by communicating

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our advice in politically and societally palatable form. The OSTP meeting was at least a step in that direction.

It remains to be seen how the Administration will synthesize the abundant advice it has gathered through this meeting and other channels into the advertised blueprint, how the blueprint will fare in Congress, and whether the revised and elevated science and technology coordinating scheme embodied in the President's new National Science and Technology Council will hold sway over the agencies and their missions. Perhaps it's time for a series of televised science and technology town meetings to expose our ultimate customers to the rationales we know so well but have explained so poorly.

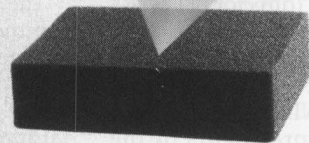
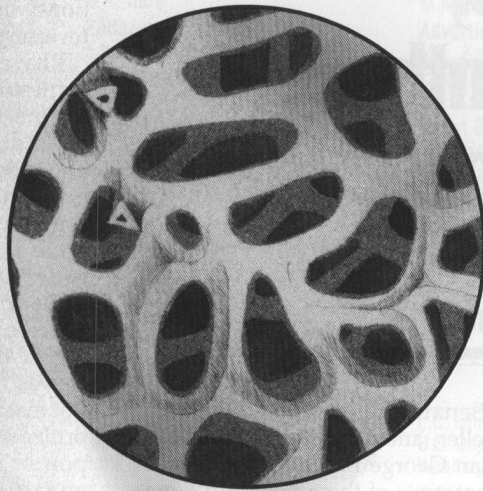
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