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Anti-terrorist agendas

The current security crisis will lead to the restoration of an intimate relationship between science and the US federal government, in which money-grubbing will take a back seat.

The events of 11 September have shaken many people to the core, scientists included, and it is naturally taking time for their various practical implications to sink in. But one thing is clear: in time of war, modern governments require a special relationship with their best scientists and engineers — a relationship that now needs to be recast.

In the United States, such a relationship was forged by President Franklin Roosevelt and Vannevar Bush, the first real White House science adviser, during the Second World War, and prospered during the early years of the cold war. In the decade of American complacency that followed the cold war's end, it fell into considerable disrepair.

Under President Bill Clinton, the President's Council of Advisors on Science and Technology (PCAST), the White House Office of Science and Technology Policy (OSTP) and the National Science and Technology Council sought to supervise the massive research and development exercise marshalled by the US federal government. The OSTP made some successful forays — into the sharing of satellite data between military and civilian agencies, for example — but its reach was minimal. It is a measure of the limited influence of these bodies that all have lain dormant this past year, with no obvious consequences.

That should change now. At a meeting at the National Academy of Sciences on 26 September, an array of heavyweights, including John Marburger, President George W. Bush's nominated science adviser, Bruce Alberts, the president of the National Academy of Sciences, Sig Hecker, Joshua Lederberg, Sam Nunn, James Woolsey, Wolfgang Panofsky, Richard Garwin, Maxine Singer and Richard Klausner, met privately to discuss the form that the change should take.

These luminaries don't have all the answers, and would not pretend to do so. But they do have some knowledge of the relationship between science and government. One of their first proposals was a new approach to research related to counter-terrorism. Naturally, preparedness for bioterrorism is part of that — even on 26 September, few could have foreseen how quickly it would rear its ugly head.

But the scope of the challenge is unprecedented. It is no longer possible for a few well-placed advisers to grasp all of the disciplines and subdisciplines of the United States' $250-billion-a-year science and technology enterprise ($90 billion in the public sector, the rest in industry). Expertise in some of the most important fields, including biotechnology and computer software, is widely dispersed, much of it outside the purview of government.

Federal advisory panels such as PCAST will have an important role in establishing links between civilian researchers and the government. But these panels will need to be reconstituted to function with an urgency and flexibility that they previously lacked.

Furthermore, the basic dynamics of relations between scientific leaders and the government will have to change. For too long, the central characteristic of these relations has been the scientists' unending quest for more money. Already, the community's discussions with the Congress have focused unduly on the need for more money for intelligence, or more money to counter bioterrorism.

The community needs to get past this. In the coming months, a long, hard look is likely to be taken at the shape of the US federal government's hefty investment in research and development. It is by no means clear that all existing activities will be sustainable at a time when the government will be required to focus much of its attention on America's national-security crisis. Scientists are going to be a part of this reorientation, perhaps in far larger numbers and for a longer period of time than most of us care to imagine. ■

Top-heavy and out of touch?

A powerful new agency needs to attain a more appropriate balance between Japan's policy-makers and researchers.

If there's one thing that almost all Japanese scientists, science policy-makers and industrialists agree on, it is that Japan would benefit from more coordination between its various governmental science activities. To that end, the cabinet-level Council for Science and Technology Policy (CSTP) was born earlier this year.

Some claim that the CSTP has already overstepped its bounds in its first year by making specific budget decisions rather than merely defining broad national priorities. Others would like to give it more power, for example to distribute grants, and there is even discussion about creating an integrated biosciences body — what some say would be a Japanese National Institutes of Health (NIH) — under its auspices (see page 659).

Concerns that the CSTP is too bureaucratic — ministers dominate the CSTP in numbers and influence — are mirrored by fears that any NIH-like organization would be completely 'top-down' in operation. The worst-case scenario is that these non-scientists would back only the kind of science that produces short-term gain and expands their own ministries' budgets. Many researchers feel alienated from and distrustful of this body, which should be representing them in the government. They plead that a certain amount, say 60%, of spending on research and development should be set aside for basic science.

No integrated science effort will be successful in Japan without a greater voice from scientists in the government. The CSTP should include more than the one active scientist it has now. The government must learn to broaden its group of decision-makers. If implemented correctly, the CSTP could come into its own over decisions about setting up an NIH-like organization or by taking a leading role in supporting such a body. Otherwise, the worst fears of Japanese scientists could be realized.

For their part, researchers must make their voices heard. Too often they wait for their opinions to be asked, and complain when they are not, but at the same time view such political activity as getting their hands dirty. They should, rather, actively voice their concerns to their institute directors, their politicians and, not least, the CSTP. ■