editorial

# Ensuring that fundamental research remains unrestricted

On 25 September the White House issued a policy directive (National Security Decision Directive 189) that clearly exempts unclassified "fundamental research" from restraints on scientific and engineering communications—restraints that have been under debate in Washington ever since the Bucy report of the Defense Science Board in 1976. NSDD 189 (see news story, page 55) is a milestone in clarifying a highly complex set of conflicting national objectives. While the proof of the pudding is in the eating, the President has given clear guidance on what is, and is not, allowed in the recipe. To the scientific community, which fought hard for this policy, the pudding tastes better already.

Credit belongs to all the parties to this national discussion: to Dale Corson's National Research Council panel, whose work is referenced in NSDD 189, and to Richard Perle and his DOD colleagues, whose understanding of the scientific community's difficulties removes a major source of rancor on an issue requiring national unity.

The National Security Council brought the parties together; the Office of Science and Technology Policy never flagged in its two-year effort to get the issue resolved. Above all, credit must go to President Reagan, whose authority stands behind the decision.

Scientists devote their careers to the discovery of knowledge for the common good and are utterly dependent on the confidence that the people and their government have in them. To find oneself having to choose between the ethos of science, academic freedom and the First Amendment on the one hand, and maintaining a reputation as a loyal, law-abiding citizen on the other would be intolerable.

The President's directive addresses these pressures by saying, quite directly, "It is the policy of this Administration that, to the maximum extent possible, the products of fundamental research remain unrestricted." And "fundamental research" is defined as "basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community. . . ." It is distinguished from proprietary research, which typically includes industrial development, design, production and product utilization.

It is very significant that the policy is restricted to fundamental research but is not restricted to any one research setting, such as universities. In principle, fundamental, nonproprietary research in corporate laboratories and unclassified, open work in national laboratories are also covered.

There is only one "out" provided for agencies who feel they must impose restraints on Federally funded university research. A project can be classified. That is a clear-cut, well-understood process; on many campuses it would result in a decision not to accept the project.

There is a second, more subtle, "out" that bears watching. NSDD 189 reminds the agencies they still have the ability to control unclassified information using authority provided by Congress expressly for that purpose. Among these are the Munitions Act (ITAR regulations) and the Export Administration Act. Congress has been struggling to revise and renew the latter Act for several years (without success so far).

Will the new law and regulations under current law be faithful to the President's policy instruction? It is the duty of the National Security Council to see that they do.

Thus the interest now shifts to the Department of Commerce's redrafting of section 379.3 of the export control regulations. This section deals with research in universities, national laboratories and companies and with collaborations among them. The language currently under consideration is largely the output of an interagency task force convened by OSTP, and thus attempts to follow the spirit of NSDD 189.

Vigilance will continue to be required. The temptation to try to develop rules to cover all circumstances often leads to rigidities; science is a creative endeavor and is extremely vulnerable to the external imposition of unpredictable and arbitrary administrative constraints.

There is no Maxwell's demon that would allow fundamental knowledge to flower undiminished while preventing its outward diffusion to potential adversaries; the President has decided not to try inventing one. Instead, he offers a clear direction: The national defense is important and technological superiority is essential to the national strategy; scientists must help government build an effective system for protecting national-security technical assets.

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