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Science: Too Much Accountability

The National Science Board last year reported that the support of basic research in constant dollars declined by 13 percent between 1968 and 1974 and that the expenditure per active scientist was down a sharp 30 percent over the same period.

The dwindling support of research, however, is compounded by an even more serious problem—the increasing control of research by legislation and regulation. No scientist questions a reasonable need to define goals and to account for the expenditure of public funds. But it seems legitimate to ask whether science today is not suffering from unreasonable and unproductive strictures that affect both the quality and the quantity of research.

Legislative constraints include the unprecedented move last April by the House of Representatives in voting to shut off funds for a National Science Foundation grant proposal. This action was led by a powerful congressman who believed that the proposal was scientifically unsound and morally unacceptable. Yet this research proposal had been judged meritorious by scientific peers after considerable study, had been endorsed by a top-ranking government advisory committee, and had been subjected to searching inquiries by senior government officials.

At the grass-roots level, it is the regulations that directly affect the pursuit of research. The actual conduct of a research program has become so engulfed by rules and regulations that research costs have escalated at a frightening rate. More subtly, however, the real damage is being done to research priorities and to the creative risk-taking of the investigators. Scientists are tending to select areas of research where money is available, such as cancer or energy research. The most productive and creative workers are stimulated to follow promising leads in directions unrelated to the subjects of their grants. The freedom to pursue these leads lies at the very core of the research process, and is the main source of its conspicuous success. Yet new and rigid rules have all but eliminated this essential flexibility and opportunity for serendipity on which original discovery depends.

Scientists, of course, are not innocent bystanders in the evolution of this problem. They have contributed their share to the creation of a plethora of new regulations. Unfortunately, new and tighter regulations imposed on top of old ones have been amply demonstrated to be an ineffective management tool to improve accountability and performance. Indeed, in each category of funding there exists the potential for abuses, but more regulations generate more abuses. A common example is the rush to buy a piece of equipment before the expiration date of a grant because it has not been possible to transfer funds into a critically needed salary category.

The solution to this problem is first to convince legislators, managers, and regulators that it exists, and that it is an important factor inhibiting the proper utilization of national resources. Scientific research must be recognized for what it is, a social rather than a business activity, even though it generates the same outward patterns of growth. Informal cooperation first becomes organized, then the organization eventually becomes laden down by a bureaucracy in which originality of thought at the expense of routine business efficiency is discouraged. A working consensus between the research scientist and his legislative and regulatory counterparts can only be achieved by a dialogue that includes a rational analysis of alternatives. With the installation of a new national administration, a fresh opportunity exists for the scientific community to initiate this dialogue with government for the benefit of all concerned.

The alternative should be obvious. It is not much of an exaggeration to suggest that had the present bureaucratic structure been in operation when poliomyelitis research was in its heyday, we might today have a compact, efficient, computer-operated, portable iron lung rather than two vaccines.—ELIE A. SHNEOUR, *President and Chief Executive Officer, Biosystems Associates, Ltd., Post Office Box 1414, La Jolla, California 92038*