Science and Secrecy

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There is an old and by now familiar edginess between two important threads in American culture. We depend increasingly on science and technology, activities heavily based upon the free flow of information. At the same time, our national security interests often require efforts to conceal information—and so, increasingly, do the interests of commercial research sponsors. Not surprisingly, the science values sometimes collide with the security values.

This summer the International Traffic in Arms Regulations (ITAR)—rules barring the export of weapons and related data, now managed by the U.S. State Department—suddenly (and, to those affected, inexplicably) were being applied to basic research projects involving satellites. Graduate students and fellows from certain other countries were denied access to the work, and their scientific supervisors were understandably unhappy. This situation has reminded some of us of the early 1980s, when a similar misapplication of these regulations was finally ended by decisions in the Department of Defense and a later report from the National Academy of Sciences. The result was an Executive Order signed in 1985 by President Reagan that essentially limited ITAR to military hardware and related data. The present reincarnation suggests that secrecy impulses are hard to suppress.

It is difficult for some, both inside and outside the security community, to understand why science and secrecy find it so hard to get along. The reason is simple: Scientific culture is by nature oriented toward disclosure. Because the research venture grows by accumulation of information, it depends on the free availability of previous work through publication. Security requirements, on the other hand, often dictate concealment. Scientists tend to be exquisitely careful about data but more casual about office order or precise dates, whereas security processes emphasize compartmentalization and strict adherence to procedure. When the two cultures mix, the contrasts between them are dramatically enhanced, sometimes creating conflict. For example, Congress has been holding hearings on the loss and recovery of computer hard drives in Los Alamos. As a result, Secretary of Energy Richardson proposes to remove the University of California from security responsibility at Los Alamos and the other national laboratories. Indeed, within the past year scientists serving in two quite different "secure" institutions have been charged with removing classified data to their home computers

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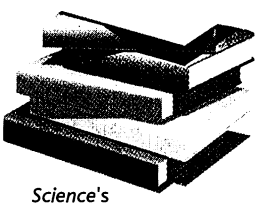
In the early 1980s, when I was President of Stanford, I was asked by Richard Perle, then Assistant Secretary of Defense in the Reagan administration, why we declined secret government research contracts. I replied, apparently unpersuasively, that we could not live with a situation in which work by faculty and by graduate students could not be open to examination and evaluation by others. Now the universities face similar challenges from a very different source. Commercial interest in basic scientific work, especially in biomedicine, has exploded, and many companies are doing, in campuslike settings, research that was once done only in universities. Their connection with academic scientists is strong; many were founded by faculty members, and others involve professors heavily as consultants.

This phenomenon is not entirely new. After all, trade secrecy is not exactly a stranger to academic settings, and proprietary constraints have been applied by industry in the past. But the present environment has spawned more insistent arguments for secrecy. Intellectual property protection may require delays in publication, and the for-profit sector has more reasons for proposing to restrict the distribution of data, experimental materials, and results. The cross-links between academic and for-profit sectors have become so much stronger that they raise new questions—not only for faculty members but for their institutions as well. Should universities tolerate restraints on the sharing of materials, data, and proprietary techniques? What limits should they place on the pursuit of patents and licensing revenues? Should they countenance delays or other restrictions on the publication or presentation of new findings?

Universities and their faculties have to recognize that they confront two different sponsors—government and industry–with different but often equally insistent demands for secrecy. Those demands require consistent responses, recalling a wise observation first made by Admiral Bobby Inman: Society will judge harshly those who are willing to keep for profit the same kinds of secrets they are reluctant to keep for patriotism.



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