Chapter 6

Constitutional Issues: An Overview

The U.S. Constitution says little about what s a major force in our society: the development and use of science and technology. Yet in spite of its silence about science, the constitutional framework has proved remarkably hospitable to the flowering of scientific research in this century. There has been a strong mutual dependence and respect between government and scientific enterprise that is only rarely threatened. But challenges to the constitutional status of science have occurred in the past, and will surely occur in the future.

The right to free dissemination or communication of scientific research results or other scientific and technical information is not unlimited. It is and has always been limited in the interests of national security.

In spite of its silence about science, the constitutional framework has proved remarkably hospitable to the flowering of scientific research in this century.

Existing restrictions on the flow of scientific information may be administrative, statutory, contractual, or voluntary. The nature of information deemed to be sensitive from the standpoint of national security goes far beyond that related to weapons and includes almost any kind of scientific or technological data that may bear on our industrial capability or competitive position in world trade.[1] National security restrictions on scientific communication apply not only to documents, reports, and publications, but to informal modes of communication, such as talks at professional meetings and participation in scientific seminars. Although primarily applied to information in which government has a "property-type' interest—which results from research carried out by, or contracted out by, government–national security restrictions may also apply in some cases to research done under a government grant for support of basic research, or even, at least in the case of nuclear science and engineering, to information generated entirely without government funding or involvement.

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Almost all of the people and groups that have spoken out on this issue acknowledge that freedom of speech and press are not absolute and must be balanced against the competing interest of national security. They disagree on where that balance should be struck.

Some people take the middle position that while the current Administration defends a strong position on national security protections and particularly emphasizes the need for strong technology export controls and a dominant role for the military in defining those controls, nevertheless there has been no obvious abuse of authority. The Department of Defense has not pushed dramatically to the theoretical limits of its power to restrict communications.

Others argue that even stronger controls over information are needed to limit the ' 'unwanted transfer' of American science and technology to countries that are very ready to use it against us. The courts have long recognized

[1] 'Section 1.3 of Executive Order 12356 says that information ıay be classified "if it concerns military plans, weapons, or operations; the vulnerabilities or capabilities of systems, installations, projects, or plans relating to the national security; foreign government information; intelligence activities (including pecial activities), or intelligence sources or methods; foreign elations or foreign activities of the United States; scientific, *echnological, or economic matters relating to the national security;* U.S. Government programs for safeguarding nuclear materials or facilities; cryptology; a confidential source; or other ategories of information that are related to the national security . . . ." It also says that such information "shall be classified . . [when] its unauthorized disclosure, either by itself or ı the context of other information, reasonably could be expected o cause damage to the national security. " (Emphasis added.)

the need of private parties for protection of their trade secrets. Some urge that a comparable right of protection be granted the government to protect sensitive knowledge generated by government-sponsored research. Thus one can defend a proposition that scientific interchange should, in general, be encouraged; but it is inherently limited by the proprietary nature of scientific knowledge and therefore, unlike political speech, is not protected by the First Amendment.

Critics of this position point out that the information in which government has a property-type interest is exactly the information that should be freely communicated; because government authority to support scientific experimentation flows from its power to spend in order to promote general welfare, and funding that produces that property-interest is generated through taxation of the public.

Only a few civil libertarians would disallow any restriction on the dissemination of scientific information in the interests of national security, but others believe that the burden created by existing controls of several kinds, taken together, is excessive. It has become, they argue, counterproductive in its effects on science and industry, and more importantly, an erosion of constitutional rights and liberties.

There have been only a few direct challenges to the constitutionality of these limitations on the cherished freedom of speech and press. The President as Commander in Chief is considered to have full authority to order classification of government-generated information. Although the constitutionality of some aspects of the Atomic Energy Act and Invention Security Act might be questioned-especially their prior restraint provisions and their applicability to privately generated information—only a few particularly weak challenges have been brought. Ironically, or so it may seem to the layman, restrictions on speech and press under export controls may be less subject to challenge, rather than more so, because their infringement on freedom of speech and press is considered incidental to another legitimate purpose. Yet some critics argue that in this area, the overlapping of national security objectives, rather loosely defined, and economic or industrial objectives, acts to confuse and prejudice the justification of government actions to limit constitutional rights.

Among those who are concerned with preventing the "chilling' effects of excessive restrictions on freedom of speech and press, there is a further difference of opinion. Some argue that science was intended by the Founding Fathers to enjoy a special position and special protection under the First Amendment; and that the courts must recognize and implicitly have recognized that special position. Other scholars deny this special protection and emphasize that the courts have always applied to First Amendment challenges on behalf of scientific communication a "balancing of interests."

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Professor Steven Goldberg of The Georgetown University Law Center is among those who argue that science enjoys, under the Constitution, possibly more protection than even political or literary speech. He argues that those who participated in drafting the U.S. Constitution, particularly Jefferson, Madison, Hamilton, and Franklin, were men of the Enlightenment, with broad interests in science, who regarded scientific freedom from constraint by church and state as essential to democracy and constitutionalism.[2] Goldberg argues that the Constitution contains an 'implied science clause": that Congress may legislate the establishment of science but not prohibit the free exercise of scientific speech.

[2] Steven Goldberg, "The Constitutional Status of American Science," *University of Illinois Law Forum*, No. 1, 1979, pp. 1-6 ff. Unless otherwise attributed, discussion of Goldberg's views throughout this section is based on this article. Other scholars share the view that scientific communication enjoys an especially protected position under the Constitution. See for example, John A. Robertson, "The Scientist's Right to Research: A Constitutional Analysis," 51 *Southern California Law Review* 1203 (1977); and Delgado & Millen, "God, Galileo, and Government, Toward Constitutional Protection for Scientific Inquiry," 53 *Washington Law Review 349 (1978).*

Under the provisions of Article 1, Section 8, which authorizes Congress to spend money for the general welfare and therefore for scientific research, Goldberg says, "Science is established in the sense that religion cannot be established. " The First Amendment was intended to prevent "the suppression of enlightened science by the Church."3 The "free exercise" and establishment clauses are, Goldberg says, complementary. Science enjoys a protected status.

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He also argues that modern constitutional decisions support this thesis. In Roth v. *United States,*[1] concluding that obscenity is outside of First Amendment protection, the Court said that discussion of "sex in scientific works is not itself sufficient reason to deny material the constitutional protection of freedom and press. " In *Miller v. California*[5] the Court said that the "First Amendment protects works which, taken as a whole, have serious literary, artistic, political, or scientific value. " When the Court invalidated an Arkansas statute barring the teaching of evolution in public schools,[6] the Court's scrutiny of the statute (according to Goldberg) "was more intense than in the usual establishment case because the competing value at stake was science.'"

[1]Goldberg points (p. 5) to Madison's "Memorial and Remonstrance Against Religious Assessments' and to comments on Galileo by Jefferson, saying, "The Jeffersonian wall between church and state was designed in part to protect American Galileos."

[4]354 U.S 476 (1957).

"413 Us. 15 (1973).

[6]*Epperson v. Arkansas, 393* U.S. *97 (1968).*

[7]The Court said, "The State's undoubted right to prescribe the curriculum for its public schools does not carry with it the right to prohibit . . . the teaching of a scientific theory or doctrine where that prohibition is based upon reasons that violate the First Amendment. Ibid. at pp. 1 1 *2-113.*

Goldberg maintains that while "The Courts have had little occasion to define precisely the limits of the government's power to classify scientific material, " a reading of those decisions that exist and of the opinion of constitutional scholars shows that science "is fully protected by the speech and press clauses. " He says:

> As leading first amendment scholars have long recognized, suppression of scientific information is inconsistent with the democratic political process . . . . Even when scientific work is not immediately applicable to political controversies, it plays an important role in maintaining a free and informed society. Such was the view of the framers, and it has been the consistent view of the courts (p. 16).

Other scholars, such as Professor Harold Green of the National Law Center, discount this thesis. Green says, "There have been Supreme Court and lower court decisions that have involved or have referred to science in protective terms, but the involvement of science in these cases has usually been collateral to some other issue. " For example, in the Arkansas case concerned with the teaching of evolution, Green maintains that it was the religious purpose of the statute rather than the restriction on teaching science that was held to violate the First Amendment.

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Green, like Goldberg, points out that there have been few challenges to the constitutionality of government restrictions on scientific communications. The critical question, he says:

> . . . is the degree of protection that will be afforded against government encroachments in the name of national security, [and] the answer to this question depends on a case by *case* balancing of the respective interests.
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> A meaningful questioning of the value to the national security of restrictions on scientific expression will, however, come about only if

> the question is pressed by a vigilant scientific community that will consider and act on these issues creatively and constructively. It is not enough merely to proclaim the shibboleth that science is a sacred preserve entitled, by its very nature, to special constitutional protection.

It may not be adequate for citizens or Congress to rely on scientists to provide the watchful eye and determined protests that will maintain a healthy balancing of interests in safeguarding First Amendment rights. Scientists, after all, are often wrapped up in their immediate scientific pursuits and reluctant to involve themselves in policymaking-at least until their own activities are threatened. Moreover, those scientific pursuits may be entirely dependent on government funding and access to government scientific data.

Congress, therefore, has an essential role to play in preserving the balance through the formulation of public policy and the oversight of executive agencies. The courts nearly always defer to Congress when it presents a consistent, thoughtful position on the constitutional rights of citizens. Moreover, in the absence of congressional action, the executive branch must act. Its daily pressures to assure national security may make it less careful in preserving the essential balance. As Justice Marshall noted in the Pentagon Papers case, unilateral executive efforts to restrain communications without following careful criteria established by Congress may run afoul of the constitutional rule that the executive is not free to legislate.[8]

Gerard Piel, former President of the American Association for the Advancement of Science, argues that there is a social contract embedded in the Constitution through which our society attempts to foster science. Piel points out that Thomas Jefferson, in justifying the First Amendment, argues that "to preserve the freedom of the human mind . . . and freedom of the press" is a cause worthy of martyrdom.[9]

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[8] See *New York Times Co. v. United States, 403* U.S. 713, 74((Marshall, J., concurring).

[9] Gerard Piel, "Natural Philosophy in the Constitution, *Science*, vol. 233, No. 5, September 1986, p. 1056.

Appendix