Summary

The First Amendment says:

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for redress of grievances.

The provisions of the First Amendment are designed to protect the most sensitive areas of personal belief-religion, ethics, political philosophy-and to act as a bulwark against government intervention in the most basic elements of our democracy: the expression of thought and opinion. As necessary conditions o democratic governance, the rights embodied in the First Amendment occupy a "preerred position" in the hierarchy of constitutional rights and powers. The first clear statement of this preferred position doctrine came in *Thomas v. Collins*, in which Justice Rutledge, speaking for the majority of the Supreme Court, said:

This case confronts us again with the duty our system places on this Court to say where the individual's freedom ends and the State's power begins. Choice on that border, now as always delicate, is perhaps more so where the usual presumption supporting legislation is balanced by the preferred place given in our scheme to the great, the indispensable democratic freedoms secured by the First Amendment . . . That priority gives these liberties a sanctity and a sanction not permitting dubious intrusions, and it is the character of the right, not of the limitation, which determines what standard governs the choice ¹

Notwithstanding the absolute language of the First Amendment and its preferred position in the constitutional order, however, the Supreme Court has never interpreted freedoms of religion, speech, press, or assembly to be without limitation. These rights, which are collectively referred to as freedom of expression, can be limited in a variety of ways. Government can prohibit entirely speech that is obscene, threatens national security, or is an incitement to imminent violence or to the overthrow of the government; it can place reasonable restrictions as to the time, place, and manner of commercial speech or speech that takes place in public; it can force one to compensate victims of defamation and other forms of speech injurious to private interests; and it can regulate speech that takes place over the airwaves. Moreover, when speech or the exercise of religion merges into action, government can regulate those forms of expression to protect the public health, safety, and welfare.

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Because freedom of expression is not absolute, it often involves a balancing of governmental interests against the rights of individuals where the two are in conflict. Balancing rights against power occurs in the context of contemporary values and institutions: economic, political, ethical, legal, and scientific or technological.

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Science and technology may affect the balance between First Amendment rights and government interest by changing power relationships between individuals and between the individual and the state. As it first did with the printing press, technology will give rise to new ways of communicating, which amplify the ways in which individuals and organizations express themselves. Information and communications technologies, such as satel-

lites, computers, and digital transmission lines, are, like the telegraph, telephone, radio, and television technologies before them, changing the ways in which we communicate ideas, theories, opinions, and incitements to action—they affect who can say what, to whom, to how many, and at what cost.

Taken together, advances in computers and telecommunications may change the concept of 'the press' from one in which one organization publishes for many to one in which many share information amongst themselves. With these changes will come new First Amendment challenges to the power of the government to regulate access to and ownership of communications media. New technologies, such as electronic publishing, may not fit easily into old models of regulation, and First Amendment distinctions between the rights of print publishers, broadcasters, and common carriers will become increasingly difficult to justify.

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New capabilities for the press to gather, store, and retrieve information on individuals may require that rules of liability for constitutionally protected speech be reexamined. The potential for technology to decentralize the editorial function may raise questions of editorial control and liability under the First Amendment. And, in an era of global communications, the question of whether First Amendment rights extend to foreign speakers in this

country, or to speakers in foreign countries when they are heard or read here, will also be raised.

The open communication of scientific information—data, hypotheses, conclusions, explanatory theories, technological know-how—is special kind of speech or publication. There no consensus on the question as to whether scientific communication enjoys the full protection provided by the First Amendment political communications. In a society in which science and technology play a central and critical role, this is an issue meriting continuing attention and debate.

It is well established that scientific communication can be limited when necessary to protect national security. But how severe can and should that limitation be? As science and technology become ever more important to our economy and our military strength, the delicate balance between individual rights and the national interest becomes both more important and more difficult to maintain. Do the limits imposed by classification, congressionally legislated restrictions, and export controls, collectively negate the right of free speech and free press in the field of science?

In fields such as mathematics, biology, or physics, basic research results in certain areas can have direct and immediate implications for technological development. In those case where the line between basic knowledge (science) and its implementation (technology) becomes thin and difficult to discern, a balance between the right of expression and interest of the state in preserving security is very difficult to achieve. There are likely to be many situations in the future in which the government will assert compelling reasons for limiting basic scientific communications.