

## THE BILL OF RIGHTS AND CIVIL WAR AMENDMENTS

The first ten amendments to the Constitution spell out those inalienable rights for which the 13 colonies, in 1776, had defied England; and for the greater security of which, 11 years later, they gave up some of the powers of nation-statehood to create a more perfect union. Many of these rights were already deeply rooted in English common law and in the aspirations and struggles of the peoples of many countries who came to the New World. Although these rights have been interpreted as limitations only against the exercise of power by the Federal Government, the three amendments added after the Civil War—the 13th, 14th, and 15th—mean that most of them limit the powers of State governments as well. These 13 amendments together are the great American charter of individual liberty against potential oppression by government.

The Bill of Rights embodies the most fundamental political, intellectual, and religious rights in the 45 words of the First Amendment. It also forbids arbitrary and lawless governmental actions that threaten life, liberty, or individual property, and has been interpreted to recognize a zone of privacy on which government has no right to intrude. The rights of those suspected of or convicted of crime are spelled out and the criteria for citizenship and enjoyment of these rights and protections are set forth.

The Bill of Rights and Civil War amendments have proven triumphantly robust through the confounding technological, social, economic, and political changes of the past two centuries. They are deeply involved in issues arising from technological change as it affects relationships between people and government.

### The First Amendment

Freedom of speech and press, the right to assembly, and the right to petition the government for redress of grievances are embodied in the First Amendment:

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 a redress of grievances.

The provisions of the First Amendment have been interpreted to provide a bulwark against government intervention in the most basic elements of our democracy—the expression of thought, opinion, and belief. As necessary conditions to democratic governance, the rights embodied in the First Amendment occupy a “preferred position” in the hierarchy of constitutional rights. As Justice Rutledge, speaking for the majority of the Supreme Court, said in 1945:

This case confronts us with the duty . . . 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 . . .

*Thomas v. Collins, 1945*

In spite of this preferred position, the Supreme Court has never interpreted the freedoms of religion, speech, press, or assembly to be without limits. Government can prohibit speech that threatens national security, that is obscene, or that is an incitement to violence or to the overthrow of the government. It can place reasonable restrictions on the time, place, and manner of speech, and can regulate speech that takes place over the airwaves. This often involves a balancing of individual rights against the interest of government, in the context of contemporary economic, political, ethical, legal, and scientific or technological values.

Science acts as arbiter of what can be done to change and exploit the physical world. It thereby renders speech more potent, and moves back the threshold at which the government can claim a compelling reason for limiting freedom of expression. When the connection between science and technology is di-

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**Do national security restrictions and export controls effectively negate the First Amendment protection for scientific communication?**

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rect enough to pose a risk to national security or economic stability, the government may and does restrain scientific communications.

It may do so either by making research funding conditional on secrecy, by prohibiting speech or publication on specific scientific topics, by withholding patents, or by controlling exports of either products or production know-how. The question to be considered now and for the future is when those modes of restraint, taken together, place an intolerable burden on the exercise of First Amendment freedoms.

Knowledge can be misused, and technology can be abused, by being turned to ends that threaten life or defy cherished values. The question arises, therefore, whether there are areas of scientific and technological research that should not be undertaken. Should the pursuit of certain kinds of knowledge be forbidden? The question has been raised at various times about research on atomic energy, recombinant DNA, neuroscience, eugenics, birth control, and fetal tissue. Some thoughtful people, laymen and scientists alike, argue that science and technology are not neutral; that, once unleashed, they may have pernicious effects. They believe that some kinds of knowledge, or some methods of experimentation are ethically unacceptable and ought therefore to be curbed.

Other equally thoughtful people argue that all knowledge is valuable and necessary to the continued progress of civilization. Advocates of this view argue that the First Amendment guarantees of free speech and press, and its prohibition against government establishment of religion reflected the Founding Fathers' confidence, born of Enlightenment accounts of Galileo and Newton, that science is a benefi-

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**Does a scientist have a constitutional right to do research on any subject? Or are there topics that should be "forbidden knowledge?"**

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cent force, not to be interfered with by government or by religious institutions.

Yet there have been few judicial decisions that address directly the implications of the First Amendment for the constitutional status of scientific research, and there are no court decisions that establish definitively a First Amendment right to conduct research on any topic, without limitation or restriction. The prevailing assumption is that scientific activity has general protection, subject to limitation where a clear national interest is involved.

Even where prohibitions on research are not involved, however, science and technology may eventually raise constitutional issues. The Federal Government is often the only source of adequate funding for scientific research in which industry has no interest. There is no constitutional right to Government research funding. But objections to some areas of research, such as those involved in interspecies genetic exchange and perhaps someday human cloning, are sometimes rooted in values that are intrinsically religious in nature yet not universally shared. Government restrictions on funding particular research projects in these sensitive areas may in the future be challenged as suspect under the establishment clause of the First Amendment, or the equal protection clause of the Fourteenth Amendment.

**Freedom of the Electronic Press**

As it first did with the printing press and again with radio and television, new 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 satellites, computers, and digi-

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**Does “freedom of the press” apply to electronic bulletin boards or to media satellites?**

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tal transmission lines, are, like the telegraph, telephone, radio, and television before them, changing the range, cost, and quality of communications.

Taken together, advances in computers and telecommunications may change the concept of “the press. Today, the term usually refers to a formal organization that gathers and publishes or broadcasts news. Such communications generally take the form of one-to-many exchange. In the future, that exchange may shift to many-to-many communications in which people with common interests share information amongst themselves, as with electronic bulletin boards.

With these changes will come the prospect of new First Amendment challenges to the power of 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 distinctions between the First Amendment rights of print publishers, television or radio broadcasters, and common carriers will become increasingly difficult to justify.

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 will be raised of whether First Amendment rights extends to speech transmitted to this country by foreign speakers.

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**Has the notion that broadcasting frequencies are scarce, and thus subject to regulation, been outmoded by technology?**

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### **The Fourth Amendment**

The Fourth Amendment is a strong affirmation of individual privacy and a barrier to the exercise of arbitrary power. It says:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched and the persons or things to be seized.

This right had a long history in English common law. Sometimes colloquially expressed as “a man’s house is his castle,” it meant that one had a right to expect that one’s home, possessions, and person were safe against arbitrary and forceful intrusion by the King’s agents. At the same time, it recognized that the lawful agents of the state can intrude on private property to execute or enforce the law, so long as they obey certain procedural rules that protect the subject of the search.

This protection was understood in 1787 to limit and regulate physical trespass, and the seizing of papers, effects, or “things.” Technology began to threaten the effectiveness of this protection about a century ago. The telegraph and telephone allowed information about oneself to be separated from person, places, paper, and objects because it could exist in the form of pulses of electricity. In 1928 (and again in 1942) the Supreme Court declared that wire-tapping was not forbidden by the Fourth Amendment because there was no physical

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**Does the Fourth Amendment prohibition on “unreasonable searches and seizures” cover all kinds of electronic surveillance?**

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trespass and physical “papers or effects” were not seized.

Congress grappled with this question in the debate that led to the Federal Communications Act of 1934 without finding a solution that fully satisfied either itself or the courts. Not until 1967 did the Supreme Court say that the intent of the Fourth Amendment was to protect people and their privacy, rather than places or property as such. The Court said that electronic snooping should be considered a form of search and seizure governed by rules and procedures adopted from traditional safeguards but adapted to new technological capabilities.

Now, there are nearly unlimited means of electronic surveillance, some from great distances (even from satellites) and with almost no risk of detection by those being watched. Intelligence agencies and law enforcement forces can locate, identify, track, and monitor people or vehicles by using devices that pick up and analyze images, sound waves, vibrations, heat, or light. Electronic devices can be fixed to people, their clothing, or their vehicles—and possibly in the future could be embedded in their bodies—so that their movements are tracked or recorded. Some local jurisdictions, for example, already use house arrest, continually monitored by electronic anklets or bracelets worn by prisoners, as an alternative to prison.

The rule laid down in 1967, and later reaffirmed by the Supreme Court, was that one is protected against surveillance where there is “a reasonable expectation of privacy.” With the remote sensing devices of today or tomorrow, the places or situations *in* which there is a reasonable expectation of privacy, in the sense that being watched or overheard would

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**Do you have a privacy interest or a property interest in your blood, urine, breath, or DNA?**

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not be feasible or even easy, are drastically shrinking. The Congress has already taken steps in the Electronic Communications Privacy Act of 1986, to bring many new electronic technologies under statutes spelling out the applications of constitutional principles of protection against unreasonable searches and seizures. Almost surely, the Congress and the Courts will be asked to consider other new technologies in the future.

At the opposite extreme from remote sensing is what may be called intimate sensing. Modern technologies use the substance of, or emanations from, the human body and its cells and tissues to detect the presence or the identity of a person, track one’s movements, or provide evidence of one’s past behavior. Such technologies can be applied to, for example, the use of drugs, sexual activities, or exposure to disease. There are new techniques for finding fingerprints, and computer systems that match them against huge banks of prints on file. Biometric security systems can identify a person by hand geometry, voice patterns, retinal blood vessel patterns, or other physical characteristics. Analysis of DNA, the genetic material within all living cells, also can be used in identification. Blood, semen, and other body fluids can be tested for a variety of factors associated with past experience or present performance.

Until 1967, the courts did not allow the seizure of “mere evidence” (i.e., things that were not themselves “the fruits or instrumentalities of crime” or contraband). But it is now well established that blood, semen, fingerprints, hair, handwriting samples, and other such evidence can be taken. Moreover, such seizures have been held not to violate the Fourth Amendment or other constitutional prohibitions against forced self-incrimination, if their disclosure is otherwise reasonable.

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**If law enforcement officers have effective “non-lethal weapons,” will any use of deadly force become unconstitutional?**

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Questions about privacy and the reasonableness of searches will continue to arise. We have not, for example, fully probed applications of the Fourth Amendment to computer memory or to future testing, screening, and analytical capabilities applied to the human body and brain.

**The Fifth, Sixth, and Eighth Amendments**

The rights of those suspected, accused, or convicted of crimes are set out in three of the ten amendments that make up the Bill of Rights, and elsewhere in the Constitution. This strong emphasis on the rights of the suspect or criminal was not because the Founding Fathers were unconcerned about crime, but rather because they were well aware that tyrannical Governments can use accusations of common crimes to rid themselves of rebels or dissidents.

The Fifth Amendment guarantees the right to a grand jury and prohibits double jeopardy, compelled self-incrimination, and the taking of life, liberty, or property without due process of law. The Sixth Amendment guarantees a speedy and public trial by impartial jury of one's peers, the right to have and to compel the testimony of witnesses, and to have the assistance of counsel in all criminal prosecutions. The Eighth Amendment forbids the imposition of excessive bail and fines, or cruel and unusual punishments.

All aspects of law enforcement and criminal justice have been profoundly affected by technology over the last decade, and this technological transformation is continuing. At the heart of it are computer and telecommunication technologies, computerized databases, and

communications networks. But two other primary areas of science and technology are also of great importance. The first is forensic science, which is especially important in the detection of crime and in the development of legal evidence of crime and guilt. The second involves social science methods of statistical analysis, computer models, simulation, and expert systems. These advances are being used in prediction of criminal behavior and recidivism, for more effective targeting of enforcement resources, and for support of legal, judicial, and administrative decisionmaking, including decisions about bail, jury selection, sentencing, and probation.

The Sixth Amendment guarantees a speedy and public trial by an impartial jury, and the right of defendants to have the advice of trained counsel, to confront and cross-examine prosecution witnesses, and to compel the testimony of defense witnesses. One of the most controversial contributions of social science to criminal justice procedure has been recent attempts at “scientific selection” of juries. There have also been experiments with the use of telecommunications in taking testimony from witnesses not physically present in the courtroom, such as abused children.

Significant changes are now occurring in the treatment of convicted felons for reasons having to do with both technological and social factors. These changes are likely to result in challenges to conventional understanding of Eighth Amendment protections against excessive bail or fines, and cruel and unusual punishments. The changes are driven by growing determination to reduce crime, particularly successive crimes of repeat offenders, and by the counter pressure of overcrowding in prisons. But social decisions in this area are becoming more complex and difficult because of:

- scientific research on criminal behavior patterns;
- the emergence of technological alternatives to imprisonment; and
- the growing possibility that biochemical and genetic research will identify determinants of (or strong forces on) criminal

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**Can a judge give you a choice of prison, or home arrest wearing an electronic anklet? What if you are required to pay for the use of the anklet?**

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behavior that are beyond the control of the offender, and thus challenge assumptions underlying concepts of both punishment and rehabilitation.

The emphasis on reducing crime by effective law enforcement and punishment (or rehabilitation or, at a minimum, incapacitation) has led to the greater use of preventive detention. This, in turn, led to a constitutional challenge, using the principle of prohibition of excessive bail, recently resolved by the Supreme Court. The pressure of overcrowding, which has been found by some courts to constitute cruel and unusual punishment, is leading many local jurisdictions to experiment with alternatives to prison. These include electronically monitored house arrest, at least for non-violent offenders who have a home and a job; and for some other offenders, chemical, psychological, and behavioral treatments aimed at behavior modification. Even surgical intervention—e. g., castration—has been proposed by one court as an alternative to prison.

Alternatives to prison maybe challenged as “cruel and unusual punishment. Courts have generally interpreted “cruel” to mean the imposition of bodily pain, but have recognized that this definition may change over time. Or the alternatives may be challenged as invasions of the rights of prisoners, who are considered to retain some privacy rights. As these techniques have been used so far, they always require the consent of the subject and are considered a benefit or privilege for the offender, who would otherwise go to prison or remain there longer. Some, however, question the reality of informed consent when the alternative is imprisonment.

Finally, to the degree that alternatives to prison are desirable options for the offender,

there are questions about availability on an equitable basis and hence potential constitutional issues of discrimination. These issues arise because at least some of the alternatives to prison, such as electronically monitored home arrest and privately operated prisons, require prisoners either to pay the costs of the program or to have steady employment and assets, such as a fixed abode with telephone connections. Thus, those without means are likely to be ineligible. Challenges based on this factor could become even more insistent if risks of incarceration become significantly worse because of the spread of AIDS in prisons.

The use of science to gather, analyze, and present evidence in criminal proceedings can raise troublesome questions about the accuracy, reliability, and credibility of the methods used. Questions are also raised about the ability of jurors, lawyers, and judges to understand fully both the significance and the limitations of such evidence. These questions, in turn, may raise due process issues. Computer models and statistical analyses used to support judicial and administrative decisions may also be challenged on constitutional grounds, particularly if used in a predictive mode (what is the probability of this offender committing another crime if he or she is paroled?). Such models are necessarily based on information about characteristics of or past behavior of categories of people, and are then used to predict or assign probabilities to the behavior of an individual. Thus they are suspect of discrimination.

Law enforcement agencies are trying to develop technology to reduce the need for deadly force when subduing or arresting subjects. The goal is to reduce both the loss of life and the liabilities or penalties being levied on local jurisdictions when lives are lost. If nonlethal weapons become widely available and effective, then use of lethal weapons in all but the most compelling circumstances could be challenged as unconstitutional, because it could be disproportionate to the need or risk.

A fundamental assumption underlying constitutional provisions related to crime and punishment—and indeed, a basic assumption

of western civilization-is that people have free will or self-determination. They can be punished for crime or can be offered the opportunity for rehabilitation because they chose to break the law and can thus choose not to break the law. With a growing, although still very early and spotty, knowledge about genetic, biochemical, and environmental influences on behavior, cognitive processes, and personality, the assumption of self-determination is being, if not eroded, at least reexamined and qualified. Courts and legislatures are participating in that reexamination.

### Other Amendments

Several of the other amendments within the Bill of Rights have receded in importance over the last two centuries, perhaps again in part because of changing technology. The Second Amendment says that a militia is "necessary to the security of a free State, " and guarantees "the right of the people to keep and bear Arms. " The Third Amendment strictly limits the quartering of soldiers in private houses in time of peace. Neither of these amendments has been applied very often since 1792, although the Second Amendment is often cited by those opposing gun control laws. These amendments were intended to safeguard the ability of citizens to resist both hostile invasion and tyrannical domestic government, and to establish the primacy of civilian rights over a (professional) military force. The growth in power, scale, destructiveness, and cost of military weapons, and even of law enforcement weapons, has effectively nullified the objectives of these two amendments.

The right of trial by jury in civil cases is enshrined in the Seventh Amendment, primarily to preserve the common law distinction between the province of the court (which decides issues of law) and the province of the jury (which decides questions of fact), a distinction of great importance in the 18th century, although taken for granted now.

### Equal Protection

The Fourteenth Amendment provides that "No State shall. . . deny to any person within its jurisdiction the equal protection of the laws." Once the last resort of constitutional argument, this phrase assumed modern importance in the 1954 decision in *Brown v. Board of Education of Topeka* that segregated schools were unconstitutional. Since that time, the jurisprudence of equal protection has expanded considerably. Modern interpretations of the equal protection clause subject governmental categorizations of people to various levels of scrutiny, with classifications along race and alienage receiving the strictest scrutiny, and then gender.

The prohibition against invidious discrimination contained in the equal protection clause is based, in large part, on the moral and political conviction that people are essentially equal, and that government action cannot be based on designations of a group that are arbitrary from a moral and political point of view.

Although science and technology were probably not directly responsible for the emergence of equality as an important constitutional value, they have contributed greatly in its implementation. The *Brown* decision relied heavily on the findings of social science to support its reasoning, and modern technology has helped to reduce many of the barriers to employment and military service that were once thought to be justifications for discrimination based on gender.

In the future, science and technology will contribute to ongoing debate over the meaning of, and basis for, equal protection of the law. Thanks to science and technology, people are living longer, and continue to be productive well into old age. It is possible, therefore, that classifications based on age will become ever more suspect.

Furthermore, as our knowledge of the genetic component of ability, aptitude, and behavior grows, it may be possible to identify

not only what is common to all human beings, but also what is different. Should science establish characteristics belonging to distinct categories of people, we may face constitutional dilemmas between moral value and scientific truth. Science may test the concept of "equality," which has been left an undefined postulate of the law, and require that it be better articulated and more firmly rooted in moral and legal discourse.

### **Due Process of Law**

One of the most well known and cherished of constitutional phrases appears in the Fifth Amendment: ". . . nor [shall any person] be deprived of life, liberty, or property, without due process of law. . . ." It is repeated in the Fourteenth Amendment, this time as a specific restraint on State governments.

The phrase or its equivalent in English common law and some State constitutions, often expressed as "the law of the land," is derived from Magna Carta. As they have evolved in the jurisprudence of the Fifth and Fourteenth Amendments, the due process clauses have come to stand for two independent protections: an assurance of procedural rationality, consistency, and integrity in any government action that could deprive a person of "life, liberty, or property"; and certain substantive rights not laid out explicitly in the Constitution but deemed essential to the principles of American democracy.

In its procedural meaning, "due process" does not turn entirely on the existence of rules laid out by legislatures or administrative agencies. It is instead an independent protection against the deprivation of rights established by the Constitution or by State or Federal law. It forbids capricious governmental actions. The Supreme Court has held, for example, that due process standards must be met in such varied contexts as the allocation of welfare payments, aspects of criminal trials not covered by more explicit provisions, the suspension or expulsion of children from public schools, and the dismissal of persons in the employment of State or Federal Government.

As a source of substantive rights, the concept of "due process" has had a more checkered history. From the turn of the century into the 1930s it stood for a right to contract, and was used by the Supreme Court to negate many laws, such as laws aimed at occupational health and safety or conditions of employment. In more recent times it has been used, for example, to protect the liberty to educate one's children in a school of one's choice, to study a foreign language, to use contraceptives, and to travel across state lines. The due process clause of the Fifth Amendment, moreover, is the source of the substantive protection against invidious discrimination by the Federal government, a right explicitly protected by the Fourteenth Amendment against intrusion by the States.

Technological change has affected both dimensions of due process. On the procedural side, for example, pretrial publicity facilitated by modern means of mass communications presents complexities in criminal trial procedures that were unknown when the due process clauses were added to the Constitution. In terms of substantive rights, science and technology have developed new ways of intruding on personal autonomy protected by due process.

### **The Penumbra of Privacy**

The rights and protections spelled out in the ten amendments of the Bill of Rights and in the Fourteenth Amendment affirm and define a sphere of personal autonomy that is protected against any but the most powerful overriding interests of state. This principle was a basic tenet of 18th century political thought and was and is a cornerstone of constitutional government.

But this right to privacy was seldom articulated until 1965. Then, in the case of *Griswold v. Connecticut*, the Supreme Court struck down an anticontraceptive statute as an infringement of the fundamental right of 'marital privacy'. The reasoning in this and subsequent cases is that the intent of the Bill of Rights as a whole and hence of the Fourteenth Amendment, was to provide an addi-



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**If your life can be maintained indefinitely by a machine, do you have a constitutional right to treatment? to refuse treatment?**

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tional bulwark against governmental intrusion on rights so fundamental that one need not or could not list them. They were inherent in the idea of free men banding together of their own accord to form a government.

The extent of this sphere of personal autonomy is now being tested, and nowhere more urgently than in regard to decisions about one's own body —i.e., decisions about life, death, and reproduction. Medical science and technology, and even more fundamental advances in biological sciences, are significantly extending the range of choices and decisions that individuals and society have, or may have in the future, involving values and trade-offs that are both intensely personal and value laden.

The decision to accept or reject life-support systems is one that more and more people are already having to make; and the decision of whether and when to terminate the use of such systems may be all the more difficult, since it must usually be made by someone other than the user. In the future "life-support systems" may be entirely internal—e. g., a totally implantable heart. Will the ethical, legal, and constitutional questions be the same? The capability of saving, maintaining, and enhancing life with technological systems that, because of their complexity, risk, and cost, are inherently and necessarily limited resources will raise public policy issues, as did kidney dialysis. Is the opportunity to continue living to be a market good or will there be another means of allocating or rationing these technological capabilities? These painful choices, however made, will likely be challenged on constitutional grounds, as have the funding of other advanced medical technologies.

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**Would life-long quarantine of AIDS sufferers be unconstitutional? What about mandatory AIDS testing?**

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At the beginning of life, also, constitutional challenges are likely to arise from new reproductive technologies such as third-party surrogacy, use of donated frozen embryos, and fetal surgery and other interventions in utero. The common thread in extreme medical interventions at the beginning and end of life is that new and enhanced medical capabilities force new decisions on individuals and families, or change the balance of risks and benefits involved in traditional decisions, and by so doing, force legislators and courts to reexamine the interest of the State in those decisions.

In public health programs also, new constitutional issues are emerging that require reexamination of the traditional balance between individual rights and the general welfare. Enhanced capability to test individuals for exposure to risk, for infectivity, for **use** of prohibited or controlled substances, and for vulnerability to disease or injury are raising serious questions about the government **use** of such techniques and its obligation to protect the privacy of the subjects. **Even** more intrusive or restrictive social control measures may be proposed in the future, ranging from quarantine of individuals to regulation of critical industries, whenever our technological capability to manage or reduce or remove risks lags behind our scientific capability **to** identify and track them.

The power to intrude effectively into the core of personal privacy and autonomy in order to protect the interests of society **was** technologically limited in 1787. The ability of government to know about, and to act with regard to a specific individual, was in most cases slow, cumbersome, and highly visible, and so in most cases was effectively constrained by the simple prohibitions listed in the Bill of Rights. The power of government to investigate, monitor,

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**If a violent psychotic murderer could be reliably cured with surgery or long-acting implantation of drugs, would he or she have a constitutional right to refuse treatment?**

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and manipulate the behavior of specific individuals is not now so technologically limited, and it will be less so in the future. Biological,

chemical, electronic, social, and behavioral technologies can be expected to extend and strengthen those capabilities. The limits on their use must be found in law and policy, and in the continued reliance on the Constitution as the supreme law of the land. Strong legislative and judicial actions may be necessary to protect that sphere of individual, private activity that the Founding Fathers cherished and that the Constitution has always implicitly protected.

## CONCLUSION

This brief review of the principles of the United States Constitution highlights some of the ways in which advanced technology will test the basic premises of American government in the years to come. More detail will be provided in a series of Special Bicentennial Reports by the Office of Technology Assessment. These reports seek to stimulate serious

consideration of some of the difficult constitutional problems that must be faced as our Constitution enters its third century. The Constitution has proved to be enormously resilient in the past as technological change has altered the basic functions and responsibilities of government. It will need to be equally resilient in the future.