

TECHNOLOGY AND THE CITIZEN

by

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Your invitation honors me. I am delighted to be here. But I do have some misgivings as to my qualifications to address this meeting.

Speakers, I understand, are chosen because they have important things to say about publishing or some related form of communications. As you know, my job is to build nuclear warships and atomic power stations; my extracurricular interest is to see American education brought up to par with education in countries of comparable civilization; neither of these activities makes me an expert on publishing. So I shall not be able to deliver the kind of speech you expect on these occasions.

The subject I propose to discuss--TECHNOLOGY AND THE CITIZEN--has no direct bearing on the practical problems you encounter in your field of work. It does, however, concern you, as it concerns me, because it has to do with our liberties as citizens of a free society. Our political philosophy, our form of government have their raison d'être in the American commitment to individual liberty. Conversely, this philosophy,

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this political system will not survive unless the individual in our society remains autonomous, for only free men can make a success of democracy.

Citizens have private liberties and public responsibilities. In an oversimplified way, one can say they safeguard their private liberties by discharging their public responsibilities; contrariwise, it is because they are free, self-determining human beings that they are able to perform citizenship functions. Any diminution, whatever its cause, of individual liberty or of citizenship capabilities, makes our society less free, our political system less viable. My purpose is to show that current attitudes toward technology, and some of the uses to which technology is being put, do in fact encroach on our liberties. Let me explain:

A society is free when it centers on man; that is, when it gives paramount consideration to human rights, interests and needs. Powerful forces are driving us toward a pattern of life in which technology, rather than man, would be central to the purpose of our society. The evidence is all around us. There is a marked propensity to regard technology as an end in itself, when actually it is no more than a means to ends that man determines. There is a tacit assumption, whenever technology contravenes human desires, that man must adapt himself to technology instead of technology being made to serve man. It is symptomatic of this worshipful attitude toward technology, this insensitivity to human needs that those who utilize technology for their private purposes have been able to propagate the preposterous notion that whatever is technically feasible is eo ipso right and lawful; hence to regulate the use of technology in the public interest would improperly restrict the liberty

f the user. When technology is viewed in this lopsided fashion, it becomes a threat to our free society. We have allowed this threat to arise; it is now up to us to overcome it.

I recently came upon an editorial, written by James Russell Lowell during Lincoln's election campaign of 1860. He observed that "in a society like ours, where every man may transmute his private thought into history and destiny by dropping it into the ballot box, a peculiar responsibility rests upon the individual. Nothing can absolve us from doing our best to look at all public questions as citizens, and therefore in some sort as....rulers."

How to resolve the antithesis between technology and individual liberty; how to insure that technology will be beneficial, not harmful, to man, to society, and to our democratic institutions--this, I would say, is a public question. I raise it here because I believe the members of this audience are particularly well-qualified to explore this problem. In your business the conflict between technology and liberty--so prevalent everywhere else in our society--is muted, if not absent altogether.

Improvements in the mechanics of producing and selling books have not diminished the importance of the author. Your success still depends on him. He cannot be rendered obsolete by automation. The human factor therefore continues to outweigh the technical. As in the past, your main function is to discover talent and help bring it to fruition. You know that liberty enhances creativity, that men with a special competence must be allowed to follow their own judgment. While you will encourage authors, help them with syntax and spelling--I suspect you do a better job of teaching English composition than most schools!--give them the

benefit of your experience, you do not impose your own literary judgment on a writer who disagrees with you, nor do you insist unduly that he accommodate himself to commercial considerations.

The respect you show for the professional liberty of productive people sets you apart not only from most businesses but from other communications enterprises as well. Take the entertainment industry. It is common practice there for authors to be subjected to literary dictation by those whose position in the industry gives them power to do so, though they may be artistically incompetent. Or take the mass media. They are so dependent on advertising that, with the best will in the world, they cannot accord their writers as much freedom as you do.

My appraisal of your business is no more than a layman's opinion, but as a sometime writer and an avid reader of books I find myself marginally within your orbit. Let me say here that my contacts with you, as author to publisher, have been the most pleasant and fruitful I have ever had with anyone whose cooperation and help I needed to get a piece of work done. Moreover, since I depend on books, not only for enjoyment but also to keep me au courant with the world of ideas and with happenings all around the globe, I am grateful that you publish books on any subject under the sun; that you publish controversial books and books that appeal to limited audiences, though you know full well they may bring you no profit. Here you follow a concept of professional service that is like that of good physicians whose practice habitually includes patients too poor to pay their medical bills.

Your business is conducted more nearly as a profession than any other business I know. I assume this is due, in part, to the kind of work you

o; in part, to the human scale of your enterprises. So far, you have avoided the organizational giantism that is so prominent a feature of American life.

Huge organizations have difficulty maintaining a professional viewpoint; chiefly because, in our country at least, such organizations are customarily run not by the people who do the productive work but by a special category of career men whose particular metier is to rule large-scale enterprises--the "pure" administrators. To them, the decisive consideration is the good of the organization, by which they nearly always mean whatever enhances its power and profit. Administrators are rarely receptive to the professional viewpoint which has an ethic of its own; an ethic that, to professional people, supersedes material considerations.

It is then perhaps not surprising that when communications enterprises grow overlarge, and therefore succumb to the rule of "pure" administrators, they tend to interpret freedom of speech and the press as an economic right; the right of communications media to decide what to say or print and, conversely, what to play down or omit entirely. All too often, the determining factor will be profit, not principle. In contrast, you see more clearly that freedom of speech and of the press is a great constitutional right and has as its correlative the obligation to give the public the truth in all matters--all of the truth, no matter how controversial, how distasteful to powerful pressure groups. Book publishing is today the main bulwark of freedom of speech and the press, in the original sense of the expression which meant not an economic but a human right--the right to be informed and the right to be heard. I hope you will never grow so large that you lose your basic professionalism.

At this point I should like to register my disagreement with the popular belief in this country that every human activity ought to be conducted as a business. Whatever the validity of this viewpoint may have been at an earlier stage of our development, at present technological levels it would be wiser to demand that as many human activities as possible should be conducted as a profession. For one thing, technology is safer when it is in professional hands.

This is so because professions may be practiced only by persons of proven professional competence--obviously a protection when potentially dangerous technologies are being used. Furthermore, professions operate under a code of ethics which puts the human needs of persons they serve above all other considerations. We owe the concept of professional ethics to Greece where it was first incorporated in the Hippocratic Oath. This was nearly 2,500 years ago, but medical graduates in all countries of Western civilization still take this oath. The public is better protected against injury caused by misuse of technology when seller-buyer relations follow an ethic similar to the one in this medical oath, instead of the old Roman maxim of caveat emptor. No wonder the technology used by physicians benefits man most and harms him least.

More pertinent to my present inquiry is the fact that where the professional viewpoint prevails, technology does not diminish liberty. I made this point in my appraisal of your business, but it is worth reiterating. Moreover, work in professionally oriented enterprises tends to develop the same qualities of initiative, independence, and responsibility for the decisions one makes that distinguish the self-employed--qualities that grow only in freedom. A free society will be

longer, the more opportunities there are for men to develop these citizen qualities in their daily work.

In present-day America such opportunities unfortunately are rare. Many, perhaps most Americans now work for large, bureaucratically administered organizations. Such work is not good training for citizens; it is more likely to develop human qualities that rulers value in their subjects--as is only natural, since these organizations resemble nothing so much as autocratic semigovernments. Their structure is bureaucratic, hence hierarchical. They are in every respect the obverse of a free society.

In democracy the locus of power is in the people; sovereignty is vested in them; government must have their consent. Public officials are agents of the people and accountable to them for their public acts. In the typical large organization, on the other hand, the locus of power is in the men at the top. Commands are transmitted from the top down through clearly defined levels of authority; accountability rises from the bottom up through the same channels. Unquestioning obedience to superiors is the rule. There is little room for independent judgment based on knowledge or experience. What counts is not competence per se but the position one occupies on the administrative totem pole.

During working hours Americans employed in these organizations are subject to as absolute a government as that of any 18th century monarch. Those who manage or govern such organizations are in fact, if not in law, autocratic rulers for they have no real constituency to whom they are accountable for their actions. From top man to lowliest employee, all who work in these organizations spend a large part of their waking hours in

conditions of inequality found nowhere else in our society; conditions of inequality fundamentally at odds with our political philosophy. This inequality does not necessarily reflect unequal human competence; rather it exists because one party has behind him the power of the organization, and uses it to prevail over the other.

The founders of our nation did not expect this would happen to Americans. They intended ours to remain a society where no citizen would be ruled by anyone who had not received a popular mandate, who did not have to account to the people for his actions. This is evident in the language of our two basic charters and in the writings of the Founding Fathers, especially in the Federalist.

Thus, careful reading of the Declaration of Independence shows that our society pivots on the free citizen. Observe the order of precedence of the following basic axioms: First, there is the statement that all men are born equally endowed with "inalienable" rights and some of these are listed; then, the Declaration notes that governments "are instituted among men" in order to "secure" these rights; finally, it is stated flatly that government derives its "just powers" from the governed.

The founders were well aware that democracy is the most difficult kind of government. They knew that to make a success of it, people must have political sagacity as well as what the ancients called "public virtues"--a combination of independence, self-reliance and readiness to assume civic responsibilities. But they believed Americans possessed these qualities; that life in America developed just the type of man who would know how to make democracy work; that the land, the people and the political system were made for each other.

Among the advantages favoring democracy, the founders counted the fact that Americans were for the most part independent farmers, artisans and merchants; being used to managing their own business, such men would know how to manage the affairs of the nation. They expected there would be free land for generations and generations to come. Scarcity of population and abundance of land and resources would prevent formation of a propertyless class dependent on others for employment; real equality among our people would thus support the political equality basic to our political system.

But today the self-employed have dwindled to less than ten per cent of the working population and their number decreases each year. Free land lasted only a hundred years. Instead of a scarcity of people, we now have a surplus--in terms of available jobs. Our population has multiplied a hundredfold in but two centuries, and 70% now live in urban conglomerates. This would have dismayed the founders who judged Europe's crowded urban masses unfit to govern themselves!

Early visitors to America were amazed that we had neither paupers nor very rich men--now we have both. The richest one per cent of our population owns 28% of the national wealth, the poorest one tenth owns one per cent. The gap is greater here than in many democracies abroad. We have some of the worst slums; one fifth of our people live in want; and a substantial percentage are so poorly educated that we can find them no jobs they are competent to fill.

The special advantages on which the Founding Fathers counted to guarantee the success of their political experiment are nearly all gone. They began to disappear when the Industrial Revolution came to our shores.

highly a century ago; we have been losing them at an accelerated rate since the full impact of the Scientific Revolution hit us two decades ago. Directly or indirectly, their loss has been a result of the technology flowing from these revolutions. This technology has made us rich and our nation powerful, but the good things produced by technology have come at a cost: Today conditions of life in this country are no longer as uniquely favorable to democracy as they were in the days of the Founding Fathers.

It is pointless to indulge in nostalgia for a past irrevocably gone. I suggest we take note of what we have lost and get busy and counteract the loss of these advantages. I see no other way than by raising the competence of citizens through education.

It is strange this is never mentioned in the optimistic forecasts periodically presented to the American people--forecasts that paint a glowing picture of a push-button world where everyone will be rich and comfortable. There seems to be a tacit assumption that man can aspire no higher than to be a pampered and compulsive consumer. But unless we become more competent, hence better able to control not only our government but our technology as well, this rosy consumer paradise will lack the one indispensable prerequisite to happiness--liberty.

With the closing of the frontier a way of life came to an end which was simple and uncomplicated, therefore comprehensible to everyone. To make the wilderness habitable took a vast amount of rough work, so there was always demand for the kind of labor most people are able to perform. Book learning was not necessary for success in life. Men were scarce, so they felt needed and therefore important. Public issues could be understood by ordinary men; de Tocqueville was astounded by the lively

interest in politics he found here. "If an American were condemned to confine his activity to his own affairs, he would be robbed of one half of his existence," he wrote in the 1830's.

Today it is more difficult for ordinary Americans to be successful. Technology imposes educational requirements that call for greater intellectual effort than most people find congenial. To obtain a good job and be a good citizen one has to possess competencies that are harder to come by than were the competencies that sufficed in the past. Take job qualifications:

The technology of the society in which we live determines the range of occupational skills for which there is demand. In preindustrial America, this range corresponded closely to the inclinations and actual capabilities of average people; today it is at odds with them. Men had to work harder in years gone by, but they needed less formal schooling. Many people have trouble meeting educational qualifications that are essential at today's level of technology.

The minimum now is a high school diploma--not an excessive requirement since it can be obtained in this country for educational accomplishments that abroad are merely the compulsory minimum every normal child must attain and which, in fact, virtually everyone does attain. But at the snail's pace of American education this takes 12 years. Nearly half our youth are unwilling to spend that many years in school. They drop out before they get the diploma--ONE HALF OF OUR YOUTH! Their prospects are dismal. Good jobs are beyond their reach. With so little education, what kind of citizens will they be?

The educational requirements for effective citizenship have risen;

again, because of technology which complicates life and makes it difficult for uneducated citizens to understand and evaluate public issues. In preindustrial America, life itself developed in most Americans the wisdom and experience to deal effectively with such issues. Today, this is not enough. Citizens must have a good general education, and supplement it with much reading throughout their lives. Neither appeals overmuch to average Americans. Compared with other industrial countries, we are undereducated and we read much less, especially books, as I need hardly tell this audience. Unless this is changed we shall not be able to meet the challenge of technology.

Technology places in the hands of man the means to do enormous harm to fellow human beings, to society at large, to generations as yet unborn. Individually we are helpless; we must ask government to enact laws that will prevent technological injuries. But when the people turn to government for help, they encounter large and powerful organizations that interpose themselves between the citizen and the men he elects to public office. Technology is for the most part in the hands of these organizations which oppose any legislation that would prevent them from using it as they please. So great is their power and influence that normally the interest of these organizations in continuing harmful but profitable practices outweighs the interest of the sovereign people in getting protective laws enacted and enforced. At times, only a catastrophe causing a public outcry will get action--the tragic case of the Thalidomide babies comes to mind. One could cite numerous examples of delayed or emasculated legislation and of inadequate enforcement of existing laws; as, for instance, against sale of foods and drugs containing

ingredients not properly tested for side effects; against dangerous pesticides and weed killers which poison fish, plants and wildlife, and upset the ecological balance of nature; against air and water pollution, etc.

This should not be surprising. Those who control technology are well-organized and constantly on guard against any move to restrain them by law. The public is unorganized and only intermittently interested in preventing misuse of technology. No wonder the voice of the people tends to be drowned out by the public relations and lobbying activities of powerful organizations with unlimited funds.

But what is surprising is that these organizations often succeed in brainwashing the public with arguments and slogans that have no merit. Take the assertion that enactment of laws to prevent technological injuries would violate the freedom of the user and therefore contravenes basic tenets of our society--a spurious claim on the face of it. No axiom is more firmly established in law than what Charles Evans Hughes called the "mutuality of liberty": One man's freedom ends where it harms another. "Freedom of action," he said, "would be a barren privilege, if it did not also connote freedom from injurious action by others." Only self-centered, immature minds equate freedom with absence of all legal restraint; with the untrammelled right to pursue one's own objectives, regardless of the effect this may have on others. "To be free," said Voltaire, "implies being subject to law alone"; it does not mean being subject to no law.

Or, consider the specious argument constantly used to defend practices the public wishes to outlaw or to regulate: "Technology," it is claimed, "demands" these practices; "you can't stop progress." Is it not disturbing

that the people are so easily pressured by purveyors of technology into permitting so-called technical "progress" to alter our lives, without attempting to control it--as if technology were an irrepressible force of nature to which we must meekly submit.

There is something topsy-turvy about the constant exhortation to go out, be patriotic and buy, or the economy will collapse. Does man exist for the economy or does the economy exist for man? Has our national purpose shrunk to the single objective of digging out our limited capital of nonrenewable natural wealth, turning it into goods that will quickly become obsolescent, so that more wealth can be dug out and more goods produced and so on ad infinitum until all our natural capital is gone? The implication is that technology dictates human behavior and we must obey its commands.

Nothing could be further from the truth. Technology is a product of human effort. How then can it have any purpose other than to benefit man--man in general, not merely some men; man in the totality of his humanity, encompassing all his manifold interests and needs, not merely some one particular concern of his--as to make money, to exercise power, or to simplify his work?

Are we condemned forever to a type of television that denies us the fullness of its great potential for human enlightenment and enjoyment because, in its present form, it is immensely profitable to those who control it? Must our right as free citizens to privacy in personal life be yielded, whenever an employer wants to use lie detector tests on job applicants? Quite apart from the dubious validity of these tests, does anyone have the right to subject another human being to this indignity--

a routine employment practice? Is there no recourse against being compelled to go through life with an assigned number--as if one were the inmate of a prison--because this facilitates the use of computers by the bureaucrats handling social security and income tax returns? Must we let highway departments browbeat us into meekly accepting their argument that the technical advantage of straight-line highways always outweighs tradition, esthetics, solemn promises to preserve an area as a national park, or the passionate desire of human beings that their community remain intact and nature unspoiled?

In these examples, which could be multiplied many times, we see the rights of those who wish to use technology for private gain triumph over basic human rights; even over rights that in our political system are deemed "inalienable." The founders of our nation made a distinction between rights men must give up in order to obtain a government that enables them to live together in peace and prosperity, and rights they should not be asked to give up. The latter are rights considered so intimate a part of the dignity of man that, were he compelled to relinquish them, he would be diminished in his humanity. The distinction between alienable and inalienable rights is perhaps the greatest American contribution to the concept of democracy as a viable system of government.

This may come as a shock to some people, but economic rights are not among those deemed "inalienable"; they are not even mentioned in our political charters. In a conflict between "inalienable" human rights--perhaps the right to life, or to the pursuit of happiness--and rights claimed by organizations to use new technologies the public considers injurious, should not, on principle, the "inalienable" right prevail,

...ply because in our political system it is recognized as being a higher
kind of right?

If we continue to exalt technology above man, it will in time become a Frankenstein destroying our free society. At a recent Conference on Cybernetics and Society, convened by Georgetown University, one of the speakers (Robert Theobald) warned of this. He said if we continue to regard fundamental human values as of minor importance compared to the benefits to be extracted from technology, the generalized use of computers will destroy "all the present rights of the individual."

It cannot be said too often that technology is a tool, a set of artifacts fashioned by modern industrial man to increase his powers of mind and body. Like any tool, it must be used in accordance with the principles that govern human behavior and human relations in our society. We should reject out-of-hand the absurd, though widespread notion that, since it changes life, technology renders obsolete the principles we found good in the past. Technology is not concerned with principles; they belong to a different order of things. Technology is for utilizing the external resources at our disposal; principles are for marshaling our inner, our human resources. Technology is a tool we use to shape our physical environment; principles establish standards for our personal life and our relations with fellow human beings. The two have nothing to do with each other.

Let us reject the notion that man is no longer master of his own and his society's destiny. Let us put him back in the center of the stage and do some hard thinking about the kind of life technology has created for us and how we might improve it. It should be obvious that, if ours is to

remain a free society, the people must have ultimate control not only over their government but over their technology as well. It would be difficult to say which of the two--government or technology--has the most profound effect on the citizen's ability to shape his own destiny.

How to make technology most useful to ourselves and our society, yet prevent it from controlling our lives--that is the problem. The problem is aggravated by the bureaucratization of American life, itself largely a result of technology. We must devise ways to limit the power of the giants now controlling nearly every aspect of American life. The founders of our nation established no safeguards against this kind of power, simply because it did not exist in their day. When our political charters were written, there existed but seven corporations in all the 13 colonies; there were no labor unions, professional associations, organized pressure groups, or even political parties. Government itself had no large bureaucratic agencies. The political system the founders devised was based on direct confrontation of the citizen and the men he elected to public office.

The founders saw the problem of limiting power so men might be free exclusively in terms of limiting governmental or public power. But the problem is perennial and cumulative. No sooner is society organized to control one kind of power than new ones appear, ranging themselves alongside the old power. Liberty is never established for once and for all. Each generation must win it anew. Each must defend it against new perils. These perils arise because men, being endowed with free will, continually alter the conditions of life. Countless decisions made in pursuit of private objectives may bring about a transformation of society

which renders ineffective institutions that once adequately protected human liberty. If liberty is to be preserved, new safeguards must be erected.

The problem we now must solve is to find a way to prevent the power of bureaucratic organizations from diminishing individual liberty and from undermining the democratic process. Unless we succeed, we shall lose our precious heritage of freedom. It therefore behoves all thinking Americans who value liberty to give serious thought to the problem. I hope you will do so. Not only do you have the capacity to make a contribution to the solution of the problem, you are also vitally involved since, in final analysis, your own business depends on survival of the free and independent individual in our society.