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FREEDOM AND THE KNOWLEDGE GAP

by
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It is an honor to receive this award and a great pleasure to be here, especially since the occasion for our coming together is the 261st anniversary of the birth of Benjamin Franklin.

We could celebrate this event in a number of ways. The most satisfying would be to reconstruct Franklin's life. It has great appeal because it confirms our faith in America. Here is the success story we like to think of as typical: the poor boy who gets rich, who rises from humble beginnings to fame and to enjoyment of the company of the great--all of it through personal effort, with no outside help. So versatile a man was he that in Franklin's life each of us can find the success story that is his own particular American Dream. I myself like best his self-education through voracious reading. It vindicates my belief that anyone who is able to read and has access to books can acquire a liberal education. Conversely, that it is a matter of personal choice if he remains uneducated.

Franklin often said he could not remember a time when he did not read. Books were his teachers. Taking the best authors as his models, he worked hard at perfecting his writing, eventually achieving a simple, lucid style. His thirst for knowledge never ceased. He taught himself foreign languages so he could read foreign books; he taught himself science so he could understand the world of science that was just opening up. He read not only for instruction but for enjoyment as well.

All his life, men of learning and position who ordinarily would not bother with an artisan, sought his company. He thought it was because "reading had so improved my mind that my conversation was valued." America's first ambassador to a major power, Franklin's reputation in Europe as a practical scientist and political philosopher was a major factor in the success of his mission. Ultimately the force and charm of his personality won French financial and military support for the American Revolution, thus ensuring its eventual triumph. But Franklin's greatest achievement was the man he made of himself. He was a man, said Mark Van Doren, who "dignified and glorified his country."

Pleasant as it is to relive the life of a great American, and in the doing to feel uplifted oneself, I shall pursue this subject no further. I am no authority on Franklin. Most of you know more about him than I. In any event, I think commemorative observances should in a more general way involve a confrontation of the present with the past. They should be occasions when we contrast the actuality of our present way of life with the promise of our heritage; or, alternatively, when we re-examine our heritage in the hope of finding guidelines that may help us solve currently intractable problems.

I shall try to do this. But, given the dimension of the subject and the limited time at my disposal, my attempt must be brief and sketchy. Still, I believe this could be of some value since we tend to immerse ourselves in current problems without considering them in their historic perspective.

To an unusual degree, we are a people preoccupied with the present and indifferent to the past, convinced as we are that everything we do, everything we possess is the best the world has ever seen. We feel superior to those who lived before us; the past has little relevance for us.

George Bancroft, America's foremost 19th century historian, once remarked that "the people of the United States will by degrees learn that theirs is a history worth knowing." Since his time a vast amount of original documentation has been made available in readable form. We have first-rate historians and they write excellent books. Quite possibly, we know more now about American history than in Bancroft's time. But it remains something of an academic exercise because we have not made it part of our way of thinking, our way of looking at the world. We do not feel in our very bones that what Americans thought and created in the past has a value of its own, worth preserving even when it is not measurable by present day yardsticks of efficiency or profitability.

One can but hope that our habit of equating "old" with "obsolete" and "new" with "best" will in time disappear, responding to that sovereign remedy Oliver Wendell Holmes was so fond of prescribing for all the ills of the world. As you probably remember, it was "to grow a little more civilized."

Civilization is a word with many connotations. One is that it creates

inheritable wealth in man-made things of lasting beauty and utility; another that it develops discrimination in judging the value of these things to modern man. If one were asked what chiefly distinguishes people in old countries from those living in countries we call "new" or "young," the answer, I think, would be their attitude toward the past. This difference in outlook--rather than technical backwardness, as we like to think--accounts for the different "look" of old countries and, incidentally, explains why the tourist traffic across the Atlantic runs mostly one way--a constant drain on our gold reserves.

I did not myself fully realize how much the present can be indebted to the past until I saw this demonstrated in simple, concrete form on a visit to Switzerland. Driving up a winding road, past terraced vineyards reaching to the very top of the mountain, it suddenly struck me that all the work of terracing had been done by hands long since turned to dust; that it was the labor of those hands that made the steep mountain slopes fruitful, thus, quite literally, "giving" the modern vine grower his means of livelihood.

Once this obvious phenomenon had revealed itself to me, I saw how everywhere abroad it forges a link between the generations, binding the present to the past and to the future as well. Along the Mediterranean you can see olive groves whose retaining walls were built in Roman times--2,000 years ago. You can also see endless columns of newly planted trees marching across the arid hillsides--in every size from seedling to full-grown oak, olive or cork tree --today's contribution to the future. Over most of Europe, centuries of cultivation have not impaired fertility of the soil. Every farmer is beneficiary of the careful husbandry practiced

by his forebears. Though population growth and technology have left their scars, the greater part of the landscape still retains the attractive ancient pattern of family farms with alternating fields and woods. Aerial surveys reveal that the outlines of English farms at the time of Doomsday Book often coincide with those of the modern farms.

Europe is full of old houses, old villages, old towns that are pleasing to the eye and attract tourists by the millions. Many are now protected as national monuments. Not immaculate museums like Williamsburg but places that have been made habitable for modern man without altering their appearance; where people live surrounded by things of beauty that have come to them from the past. I should like to see this idea adopted here, before every vestige of an earlier America has fallen victim to that most destructive of modern contrivances, the bulldozer.

On my frequent flights across our country I see bigger gashes each year, deeper wounds in the good earth of America; more pits and slag heaps where the soil has been mined and desolation left behind; more trees, topsoil and buildings ripped out to make room for the steel and asphalt world of tomorrow. For us no vineyard, orange grove or family farm has value if more money can be made by putting up factories, housing developments, parking areas. The engineers, armed with their sacrosanct blueprints cannot be stopped. Wherever it has been decided--probably by a computer--that a highway must go, there it will be driven arrow straight across the land. No matter that it destroys a landmark dear to many people, or cuts through a charming old town where something of our past has been carefully preserved by the inhabitants, or despoils a park deeded to the public "in perpetuity."

It isn't fair, of course, to blame the engineers. They are merely doing their job. There is no public outcry against them. The only voices raised in protest are those of people who are personally hurt, and of a small minority of citizens who cannot bear to sit idly by watching God's own country being turned into "God's own junkyard." Until this minority grows into a majority, determined to preserve what is left of the beauty of our land, the destruction will not cease. Each year another million acres will disappear from our store of productive land, to go into suburbs and add a further dimension to megalopolis.

Indifference to the past breeds irresponsibility toward the future. We rarely consider the consequences of our actions for future generations of Americans. We certainly did not think of them when we proceeded to cover the countryside with those endless strips of formless urban masses we call conurbation. Whatever adults may think of them as places of human habitation, they are not good places for children to grow up in.

All children are, of course, born into a world they never made, and must manage to adjust to the physical environment and style of life created by adults pursuing adult objectives. But children will develop better if their basic needs are included in these adult objectives. In countries that have retained a tradition of fitting man-made structures into the natural landscape without marring it, children's eyes grow accustomed to seeing man and nature in harmony. Few of our children have that chance today. All too many grow up surrounded by man-made ugliness, with no terrain to romp on that has not been soiled by the sticky fingers of adults. Rarely, if ever, is it possible for them to be in intimate contact with nature. Does this not have adverse effects upon them? Will they not be

even further alienated from nature than we are?

Our amazing capacity to change the contour of a continent is matched by the thoroughness and rapidity with which we have transformed our social geography. You doubtless remember Franklin's description of America in 1782. A country without extremes of poverty or wealth, but with "a general happy Mediocrity"; with "few great Proprietors of the Soil, and few Tenants"; where "most People cultivate their own Lands, or follow some Handicraft or Merchandise," and few are "rich enough to live idly upon their Rents or Incomes." Where land is so abundant that a hundred acres can be bought for "eight or ten guineas," and men are so scarce and therefore needed and valued that this sum can be saved in a short time by any laborer, wages being higher here than anywhere else.

For one more century this description remained true. Millions of landless peasants and poor cityfolk came to America and found the ultimate goal of their dreams: a farm of their own, a business of their own. But nearly everything that made Franklin's America a Utopia for ordinary men, with courage and the will to work and not much else, has now turned into its opposite.

We are no longer a nation of independent farmers, artisans, merchants or small businessmen; 90 per cent of us are employed by others, more often than not by huge organizations in which we are tiny, interchangeable cogs. Paradoxically, there are now more family farms abroad than here; there are more landlords operating large farms with machines and migrant labor here than in Europe. Where once we had neither paupers nor very rich men, we now have both. The richest one per cent own 28 per cent of the national wealth, the poorest one tenth own one per cent. We who once lived in

wide open spaces, with only five per cent in towns of over 8,000 inhabitants, are now crowded into cities and suburbs--70 per cent of us, and the number keeps growing. What was once a wilderness hardly touched by man is now the most completely man-made land on earth. Access to unspoiled nature is so difficult that it's simpler to fly to Switzerland if one craves to sit on a mountain top.

It is tempting to speculate whether Franklin or any of the Founding Fathers would have approved the changes we have wrought in the nation they helped to bring into being. That these changes have made us the wealthiest and most powerful state on earth would be of less interest to them, I think, than whether we had preserved intact our liberties.

Wealth and power were not aims of our Revolution. Unlike some later revolutions, ours was fought on the single issue of freedom to manage our own affairs as a nation and as individuals. No one imagined that the end of colonial rule would bring instant riches; nor did any of our leaders give thought to personal emolument or high office for himself should the war be won. Their passionate concern was national independence and individual liberty. They risked their lives and fortunes and gave the best that was in them to the building of an effective political framework for a truly free society.

We have been wise enough to hold on to this framework, despite our proclivity for throwing everything old overboard. The Declaration of Independence still proclaims the basic tenets of our political creed. The Constitution still provides the institutional mechanism which gives reality to these tenets. True, we have amended the Constitution. We have stretched many of its provisions to their utmost, in the process weakening

the federal structure the Founders regarded as the very bedrock upon which our political system rests. But, though we have moved a long way toward a unitary state, with power centralized in Washington, this of itself has not impaired American democracy, a different matter altogether. Consider that Sweden, a unitary state, is as democratic as Switzerland, a federal union.

Democracy, to the Founders, meant a system combining maximum individual freedom with adequate provision for the proper governance of a civilized society. The Constitution they devised with such consummate skill represented in Hamilton's words, a happy mean between "the energy of government and the security of private rights." It is this "happy mean" which I fear has to some degree been lost in our phenomenal rise to power and wealth.

This rise is the result of two major revolutions in the technique of living: the industrial revolution which came to us from Europe in mid-19th century and the scientific revolution which arrived here a century later. Both revolutions have been of great benefit, but they have also caused much harm. Modern science-based technology, in particular, poses a serious threat unless it is kept under social control. In a democracy, such control can come only through laws demanded by the electorate. This presupposes a lay public which understands enough of technology to determine where it causes injury and how this can be prevented.

But science--so important to the comprehension of modern technology--is for the majority of citizens a closed book. There is a knowledge gap of vast dimension between the public and that small elite of highly

intelligent, highly educated experts who understand science and have the use of technology. Disturbing as it is that people should differ so greatly in their grasp of a vital area of knowledge, the phenomenon is not unusual. It occurs with every major rise in civilization.

Men are the most unequal of all species on earth. They are more unequal in realms of the mind than in physical characteristics. The higher the level of civilization, the more important does mental power become for, as Gilbert Highet reminds us, "civilization is not chiefly concerned with money, or power, or possessions. It is concerned with the human mind."

But the opportunity to cultivate mind and spirit--the essence of civilization--is not seized with equal avidity by all men. Always and everywhere, civilization results in greater enlargement of the scope of human thought and action among a minority possessing high intelligence than among the majority. It follows that, although men become more equal in material possessions as civilization advances, in knowledge and in competence they become less equal.

For complete equality we must go to the animals. In their native habitat they are uniformly handsome and differ but slightly in physical prowess--just enough to vest leadership in the strongest, thus enhancing the group's capacity to survive. Some human societies at very early stages of development are almost as equal as are animal societies, no one having yet attained sufficient power to compel others to serve his purposes. There is peace within such egalitarian societies--a goal we still pursue in vain. Animals, in particular, rarely kill or even seriously wound members of their own species. There is peace and equality

but nothing else except mere survival.

Much as we dislike the idea, it looks as though inequality has throughout history been inseparable from civilization. Perhaps this is why civilized men in all ages have longed for the "simple life," be it in a rural Arcadia, a South Sea island, a frontier settlement. But as we dream of equality it recedes ever further beyond the horizon. We come no closer than political and legal equality, for these can be prescribed regardless of differences in knowledge and competence.

When life is simple, it can be understood by nearly everyone, and the capacity to function effectively is within the grasp of all. With civilization, life grows complex, harder for ordinary people to understand, demanding skills many are unable to acquire. In understanding and in competence, the gifted forge swiftly ahead. What they achieve is beyond the capacity of the average. As a result, men grow apart, their interests diverge. Society then divides into segments according to superiority of competence or superiority of numbers. Each segment may be tempted to impose its own will on society. In the past, it was possible for either side to predominate. Today the advantage is decisively with the side that has superior knowledge and competence.

We are marching with giant strides into a future where the competent become indispensable to the very survival of society, while the incompetent become redundant. Large numbers of people will find themselves displaced by machines which can do their work better and cheaper. It will take all the moral resources we possess to keep ours a humane society based on respect for the worth of every human being. It will take all our intelligence and political acumen to keep ours a free society, preserving

individual liberty and the moral and social values cherished by free men.

In our predicament, it may be wise to heed the Pennsylvania State Constitution of 1776 which declares that "a frequent recurrence to fundamental principles" is "absolutely necessary to preserve the blessings of liberty and keep government free."

We face a new version of an age-old problem which was of particular interest to the men of the Enlightenment. During that last phase of the Renaissance, political thinkers here and abroad were inspired by classical rationalism to mount an attack on every custom and institution that shackles the mind of man and arbitrarily restrains his actions--from superstition to class privilege, from tyranny by an established church to tyranny by a secular autocrat. The great achievement of our Founding Fathers was that they discovered a practical answer to the central question of the time: How to limit power so men could be free?

They saw clearly that the problem reflected an inherent conflict between civilization and liberty, for it was life in civilized society that generated the power which then suppressed the liberties of the individual. Civilization, of course, takes on different forms, constantly creating new centers of power. But the fundamental principles adopted by the Founders for the governance of this nation will continue to safeguard our liberties if we adapt them to altered circumstances. Two of these principles are particularly useful for dealing with problems caused by the knowledge gap between experts and lay public. They are first, that sovereignty is vested in the people, and second, that right and duty are correlative.

The first principle places public officials in the relation of agent

to principal, thus making them accountable to the electorate. To make this principle fully effective, we must take steps to eliminate campaign costs as a factor in choosing candidates and electing men to public office. I hope everyone will take advantage of the recent law which permits taxpayers to assign one dollar of their taxes to a fund for presidential campaign expenses.

This novel and imaginative method of socializing the cost of election campaigns should be expanded to cover congressional elections as well. This would give us a wider choice of candidates. Those elected would not be beholden to any man or group for campaign contributions. I have never met a legislator who did not resent such obligations; who would not have preferred to be accountable solely to the people who elected him. By freeing our elected representatives, legislation demanded by the people for protection against injurious technologies and for preserving our heritage would have easier passage, as would laws providing for action to undo the enormous harm technology has already caused--such as pollution of air and water.

The second principle holds that the influence each citizen exercises over his government correlates with his duty to place the common good, the public interest above his own private interest and above the interests of groups with whom he identifies himself. It holds that the right to an equal vote correlates with the citizen's duty to make himself sufficiently competent to exercise this right responsibly.

The Founders saw more clearly than we that democracy cannot succeed unless a majority of the people possess what the ancients called the "public virtues." We sometimes forget how dangerous an experiment democracy appeared to 18th century men. The framers of the Constitution thought and

wrote extensively on the difficult art of self-government. They risked it only because of their certainty that Americans could be trusted to make a success of it since they were frugal, self-reliant people and--as independent entrepreneurs--had practical experience in managing affairs. They felt that Americans developed the "public virtues" so to speak automatically, because of the kind of life they led and the way they earned their livelihood.

This is no longer true. Work as "organization men," in particular, is not apt to promote the qualities the Founders had in mind. But even if we all still had our own farms or shops, the practical experience gained from managing one's own business would no longer suffice for the competence a citizen must have today. The issues we face have grown infinitely more complex since Franklin's day. To understand and cope with them calls for the application of informed intelligence--a skill that has to be learned at school or through systematic self-education.

A century ago, Robert Lowe addressing the House of Commons spoke of the "absolute necessity of educating our masters." Suffrage had just been expanded in England and he, like others, feared an ignorant electorate. The thought that democracy requires free public schooling was novel then, but everyone everywhere has absorbed it by now. The obverse, however, that citizens in a democracy have a <u>duty to become educated</u> is not yet understood, especially among the least educated who see schooling as something to be <u>demanded</u> but not necessarily <u>utilized</u>.

Yet it should be obvious that, at the American level of technology and civilization, our young people cannot become contributing members of their society--as breadwinners <u>or</u> as voters--unless they absorb a

substantial mass of solid knowledge. Whether children like to learn the academic basics, or whether their background has given them an appreciation of the value of these subjects is irrelevant. The blunt truth is that unless they work as hard as they can to become as educated as their innate capacities allow, they will jeopardize the liberties of us all. These liberties are safe only as long as we have a viable democracy.

No one has a greater stake in democracy than the least competent of our citizens, for only in a democracy are individuals respected and granted rights whether their contributions are essential to society or not. An affluent society can bear the burden of supporting out of public funds those who lack the skills that will gain them a livelihood. But a free society cannot, in the long run, bear the burden of having a mass of voters who lack the education they need to make them responsible citizens. Education is the fundamental premise of a democratic society. Clearly then, it is not enough to provide the fullest educational opportunities for everyone; these opportunities must also be used by everyone.

Even the best education cannot give the public more than a key to specialized knowledge--enough background to read books dealing with specialized knowledge. The leisure that modern technology makes available to ever larger numbers of citizens could not be better spent than in this type of self-education--the way Franklin learned his science. It is not necessary to be able to follow scholars into the realms of higher mathematics or science in order to be able to judge the effects of technology on man and on society. There is a parallel in lay juries. Without training in law, they are able to determine the innocence or guilt

of accused persons.

Permit me to offer a few thoughts on how laymen can deal with technology. I shall have to be didactic for time is running out.

Technology is not a force of nature with its own imperatives, its own momentum, which place it beyond human direction or restraint. It is a human creation, therefore subject to legal restraint if it injures man or society. Nothing could be sillier than to claim that "you cannot stop progress." You can, indeed, and you should if you feel it has adverse effects.

Though modern technology is based on science, the two must not be confounded. Science is a body of systematized knowledge; technology is the apparatus through which knowledge is put to practical use. Whatever the scientific community accepts as proven is not open to public debate. This is one lesson mankind has learned. No one disputes that the earth circles the sun, or that atomic fission produces energy. But technology cannot claim the authority of science. It is therefore properly a subject of debate, not alone by experts but by the public as well.

Science, being pure thought, harms no one. Technology, on the other hand, is action, often potentially dangerous action. How we use technology profoundly affects the shape of our society, the quality of our life. In the brief span of time--a century or so--that we have had a science-based technology, what use have we made of it? We have multiplied inordinately; we have wasted irreplaceable fuels and minerals; we have poisoned air and water; we have perpetrated incalculable and irreversible ecological damage. On the strength of our knowledge of nature, we have set ourselves above nature. We presume to change the natural environment for all the living

creatures on this earth. Do we, who are transients on this earth and not overly wise, really believe we have the right to upset the order of nature, an order established by a power higher than man?

Experience shows that by itself the legal maxim of the "mutuality of liberty" will not prevent the use of harmful technologies. We need laws that proscribe technologies which may injure health or cause the death of human beings. The term health should not be limited to physical health but must include psychic health and protection of the human personality. New technologies based on the uncertain "science" of the social sciences involve snooping into the inner recesses of the human mind, personality testing and pseudo-scientific manipulation of human beings. When they are imposed as conditions of employment or otherwise partake of an element of compulsion, these technologies should be regulated or outlawed entirely.

Much more thought should be given to technological interference with the balance of nature and its consequences for man, present and future. There is need of wider recognition that government has as much a duty to protect the land, the air, the water, the natural environment against technological damage, as it has to protect the country against foreign enemies and the individual against criminals.

These are my suggestions. Others may have better ones to offer. What seems to me of utmost importance is that we never for a moment forget that <u>a free society centers on man</u>. It gives paramount consideration to human rights, interests and needs. Society ceases to be free if a pattern of life develops where technology, not man, becomes central to its purpose. We must not permit this to happen lest the human liberties for which mankind has fought, at so great a cost of effort and sacrifice, will be extinguished.