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DEMOCRACY AND COMPETENCE

I am delighted to be here, in the home territory of my good friend, the Honorable Carl Durham, and to speak to his many friends in North Carolina. I should like first to pay tribute to the Congressman and to his colleagues on the Joint Congressional Committee on Atomic Energy. The members of this Committee have an understanding of the technical aspects of nuclear fission and a grasp of the potentialities of atomic energy for naval propulsion today and for civilian power production tomorrow that is most unusual among laymen; it is unusual even among engineers! Their mastery of the complicated subject over which they exercise legislative supervision is not, in my opinion, matched by any other committee of the Congress. We are fortunate to have men in the Congress who possess the vision to look beyond the present power and affluence of our country to the needs of the future, and who are prepared to take action to meet these needs in time.

Nuclear reactors are, of course, but one of the many aspects of atomic development with which the Committee concerns itself. I speak from personal experience when I say that without the support that its members have unfailingly given to my group, conversion of our fleet to atomic energy would have been delayed and might have come too late to be of any practical use to the United States.

I hope that Mr. Durham will not consider me presumptious if I say that when the members of the Committee began their work--a dozen or so years ago--they knew as little about nuclear physics and engineering as I then did. We are, so to speak, classmates for we began to work with nuclear energy about the same time. The Committee was given the unusual task of presiding over the birth of a power revolution that will doubtlessly have far-reaching effects equal to, if not greater than, those wrought by the revolutions that ushered in the ages of steam and electricity. I know of no previous case of a congressional or parliamentary committee being charged with responsibility for overseeing a similar enterprise. To carry out their assignment, the members of the Committee had to master the equivalent of a college course in a complicated technical subject and do it while carrying on their regular work. Similarly, we in the naval nuclear propulsion group had to learn this whole new subject through practical experience on the job. We kept passing on what we had learned to new members of our group, thus slowly building up a corps of

nuclear engineers. The entire reactor program was a bootstrap operation from the start. Work, study, and teaching went on simultaneously. It didn't come easy. Few of us were exactly college age!

The specter of Russia's giant scientific strides lent urgency to our work. We decided to save time by telescoping the procedures usually followed in new engineering projects. As you know, the sequence normally runs from basic research to applied research, to the laboratory or "bread-board" model, and finally to the full-scale working model. We skipped the stage when theory is tried out on laboratory or "bread-board" models, and designed our reactors to fit directly into ships and power stations. This was a gamble that we could not have undertaken had we not been fortunate enough to receive the backing of the Joint Congressional Committee. With their support we were able to cut construction time for the first atomic submarine by several years. The NAUTILUS was in fact designed and built within the time usually required for the building of a conventional submarine. Omitting the laboratory model stage did increase our difficulties, however.

To most laymen--and alas even more so to public relations men--a laboratory model always seems to be practically equivalent to the finished, working product. But, this is not so. We have many laboratory reactors; reactors that produce some electricity under ideal laboratory conditions, and much is to be learned from them. There is a world of difference, however, between a research

or experimental reactor and one that must actually produce useful power for a naval ship or a utility system. Whereas laboratory conditions favor the new project, reality is troublesome.

It is troublesome because as soon as you move from the laboratory to the practical world you must deal with people outside your own group, over whose qualifications you exercise no control. I use the utmost care in choosing the engineers--naval and civilian--for my <u>own</u> reactor group and I can, therefore, influence the quality of their design work. But for <u>construction</u> of our reactors and of the ships and power stations into which they are to be fitted, we depend on governmental and industrial organizations that do not specialize in atomic energy. Most of their work is with conventional types of ships and power plants. Their managers, as a rule, lack familiarity with the peculiarities of the atom. Therefore, they tend to go about building reactors and nuclear ships in the old and tried ways that were appropriate for conventional jobs. It has taken much time and effort to convince them that nuclear power is a more exacting kind of energy than steam or diesel power. Old established organizations develop undue veneration for routines and protocol and it is extremely difficult for their managers to realize that what suffices for conventional work is quite insufficient for new engineering projects. We had, and still have, the utmost difficulty getting the idea across that technological breakthroughs can never be brought about by routine methods and protocol. The essence of

all progress is a shedding of preconceived ideas and accustomed ways of doing things and a venturing into the unknown where one is necessarily guided more by intuition and imagination than by established rules and regulations. How else can anything new be created?

Every attempt to pioneer beyond established techniques has to overcome two sets of problems. Both are the result of an educational lag which leaves us unprepared to cope with the increasing complexities of an ever rising level of technology.

The first set of problems is technical. ~~Everyone~~ ALL who works on design or construction of new engineering projects must be far more rigorously trained in their specialties than may have hitherto been necessary. They must, in particular, be more thoroughly grounded in basic principles. Furthermore, the mere ability to apply these principles routinely which may suffice in performing established engineering tasks does not suffice when engaged in developing a novel project. Only after mastering these basic principles, will they be able to devise the new ways of applying these principles which will make a pioneering project feasible.

The second set of problems is general rather than technical. Those in government and industry who administer or utilize novel engineering projects must be far more competent in their own fields of responsibility. Broader knowledge is also needed by the general public if it is to guide technological progress in a wise and efficient manner. We cannot advance unless we pay the price of

progress which is increased competence and ability to think on higher intellectual levels. Education alone--whether formal or self-acquired--will enable us to rise to our new responsibilities and thus to move ahead rapidly.

The atom sets its own categorical imperatives which we have no choice but to accept. Specifically this means that the engineers in my reactor group must perform at higher levels of engineering competence; industry must raise its standards of management and productive accuracy well above those which suffice for routine manufacturing and construction jobs; the officers and men who operate nuclear ships and the personnel who run the Shippingport atomic power station must be far more competent technically than their counterparts in conventional ships and plants. When nuclear reactors enter into domestic or international policies, those in government who have to decide how reactors may best be used to the advantage of the United States must have a thorough comprehension of the potentialities and limitations of nuclear power; above all, they must be familiar with the special safety considerations involved in the use of this relatively untried new force of nature.

At the present stage of development, reactors are complex pieces of machinery that cannot be designed, built, or operated except by highly competent persons under rigid safety precautions. Unfortunately, not all the people who exercise control in the reactor field understand this fully. Few indeed realize that one

cannot deal efficiently--or even safely--with new and increasingly complex technical developments unless one has himself attained greater technical knowledge and achieved a higher level of human competence. I do not exaggerate when I say that a major part of my own time and that of my top engineers must be diverted from our regular job and devoted to a never-ending battle for higher levels of performance by people outside my own group who make decisions about the building or use of nuclear power plants.

To those of us who have gone through the laborious process of self-education on the job, which is required when one attempts a technological advance, it is self-evident that the need for more rigorous standards of performance is inherent in the nature of atomic energy and has nothing personal about it. In fact, personalities ought never to intrude into technical matters. They do, however, because in this country we place extraordinary emphasis on getting along with people, on conforming to accepted ways of doing things, and on maintaining pleasant social relationships in our business contacts.

Insistence on high standards of performance tends to be regarded as impolite, even rude. One is therefore confronted with the choice between letting standards slide and so failing in one's assigned task, or of incurring personal unpopularity. Of course, if it were generally understood that no new project can be pushed through without exaction of new standards of performance, our demand for higher standards would not be resented. It is ignorance

of the complexities of nuclear fission which causes friction and a hostile attitude towards the rigorous specifications we are compelled to exact.

The climb upward is always difficult and painful. It is rendered still more onerous when one must periodically stop and convince reluctant climbers that it is <u>really</u> necessary to reach a higher plateau. Time thus lost in argument shows up in lengthening lead times, that is in prolongation of the period which elapses between conception of a new idea and it utilization in a useful object; as for example, between Einstein's formulation of the equation $E = Mc^2$ and completion of the first atomic bomb or nuclear reactor.

The imaginative creativity of the theoretical scientist who deals with abstract concepts is always ahead of the technical and administrative competence of those who translate the abstract into the concrete. How fast we progress technologically depends largely on the time it takes us to put new scientific ideas to practical use. Since the end of World War II, lead times have been lengthening alarmingly in this country--from $2\frac{1}{2}$ years during the war to ten years today. In Russia, meanwhile, lead time on military items is said to have been reduced to but five years. This is a serious matter for we are living in an era when technological progress has become a necessity if we are to deal adequately with the problems arising from population growth and resources exhaustion.

Moreover, with the world situation as it is today, our country must advance rapidly if it is to retain its present position of power. Delay in utilizing new ideas could spell disaster. Anyone familiar with history knows that a slight advantage, grasped and exploited by one side, has often totally altered power relationships. Today changes occur faster than ever before. We can no longer afford the luxury of ignorance of scientific and technical matters which produces delays and lengthens our lead times. Leaders in industry and government must acquire a better understanding of science and its inexorable laws so that they will find it less repugnant to consult technical experts, even those who are their subordinates.

The man of the future on whom we shall depend more and more is the technical expert. Today he is still subservient to non-technical administrators and his work is hampered and sometimes destroyed by men in whom is vested great power but who are unable to understand the realities of the new, artificial world which the scientific revolution is creating almost overnight. In the future, both a great deal more technical knowledge and a better understanding of the world we live in will be required of all those who run large organizations. The purely "verbal" men are on the way out; the men who can handle the intricate mysteries of complex scientific and engineering projects are on the way in. This applies all along the line to the skilled workman on whose judgment, concentrated attention, and sense of personal responsibility may

depend the functioning of some new and gigantic piece of engineering. To put this in military terms, we shall need more technical sergeants and fewer martinets. In our naval nuclear program we have taken cognizance of this demand for a different kind of man and we have set up schools to train the officers and men who will operate the new atomic navy.

But the need for higher competence is not limited to leaders who supervise and direct large organizations, or to the professional people who run our complex society, or to the scientists and engineers who move us ahead technologically--this higher competence is required of <u>all</u> of us. This is so because ours is a democracy and no democracy can function properly if the majority does not understand what the minority does. In a thoughtful editorial introducing their new series of articles entitled "Adventures of the Mind," the Saturday Evening Post said, "The fact is that what the scholar thinks, the artist creates, the scientist discovers, cannot achieve full reality without the rest of us. <u>Without us no idea or institution can flourish</u>." Democracy is in serious danger if the mass of our citizens whose beliefs and attitudes shape national policy and determine national mores are out of touch with the talented minority who push us ahead technologically and from whose ranks come all the trained professionals who run our complex society. Life on a high level of technology cannot be lived democratically unless all the people raise their human stature so that they may be competent to judge and direct the

new forces that our creative brainworkers are bringing under man's control.

With atomic energy we have moved to the point where man creates new elements; thus, we are now twice removed from the natural raw material. Utilization of the power of nuclear fission is but one of several projects now under way that involve moving to higher technological levels. To understand and take part in such efforts demands more of a people than the marvelous practicality for which Americans have long been famous. In the past, this practicality served us well, for our principal task was the taming of this continent; the exploitation of the natural wealth of this new land. To do this all we needed was ability to adapt and apply scientific techniques developed elsewhere.

But this practical ability no longer suffices, for now our principal task has become more complex and difficult. We are presently engaged in making over the world to suit our needs--a different objective altogether than merely making use of what is at hand. As our population soars--at present rates it will double in less than 40 years--and as our free space and our natural resources shrink, we must turn more and more toward science to devise substitutes for these resources. In a democracy, the people must therefore understand enough about science and scientists to direct scientific work toward socially desirable ends. If the people shirk the effort to acquire this understanding of science, they will not, in the long run, obtain maximum benefit

from science and preserve their democratic rights as well.

Nor can a democratic people indulge in the luxury of ignorance of the humanities, for these too become more important as the world becomes more crowded and people and nations become more dependent on one another. To sustain a free technological society today, the people must be informed in the fundamentals of the sciences and of the humanities. No better foundation for a modern democracy can be built than an educational system open to all children that helps them to acquire civilized minds through a liberal education.

More than two hundred years ago, Montesquieu remarked that the principle of aristocratic forms of government is honor, of tyrannies fear, and of democracies education. Although he profoundly influenced our Founding Fathers, Montesquieu's perception of the interdependence of democracy and education appears to have been fully grasped only by Jefferson who drew the correct conclusion that democracies must provide for the education of all their citizens. The educational plan he drew up for Virginia was far in advance of then current ideas. Everywhere education was then considered a private enterprise catering solely to those destined to become the future leaders of the country. But in a democracy all the citizens are in a sense the leaders of their country and hence all need the type of education which has been found best for developing the qualities needed to govern wisely. We cannot improve on Jefferson's

categorical statement that "if a nation expects to be ignorant and free, in a state of civilization, it expects what never was and never will be."

This is so because in a democracy sovereignty resides in the people. They rule, though for practical purposes they do so through their elected representatives. Only in very small states has it proved practicable for the people to rule directly--as in a few Swiss cantons and in the city states of classical Greece. There each voter is intimately associated with the business of governing, and therefore not likely to forget that he is a ruler. When countries grow populous and government becomes huge and unwieldy, we tend to forget that we must all conduct ourselves as good rulers.

In his long history, man has seldom had the good fortune to be ruled wisely and competently. But when he has had rulers or ruling classes who governed well, it has almost always been because they had been carefully educated for their responsibilities. Since our children will all become rulers of this country, we must educate them equally carefully for <u>their</u> responsibilities. Every child should receive an education which enables him to understand the world he lives in, the forces which shape his society, and the place his country occupies among other nations. He must be able to formulate intelligent and independent decisions based on proven facts, and he must develop considerable toughness in the face of flattery for he cannot afford to have illusions; he

must be a realist. He must also be a patriot. In final analysis, the fate of every democracy depends on whether a majority of the voters have so strong a sense of identification with their country that they will voluntarily put national interest above personal or group interests when the two conflict.

Democracy is the only government worthy of free men; it is also the most difficult. It will not run well unless all the people, or at least a majority, possess those qualities of mind and character that in other forms of government are needed by none but a small governing group. We are not born with these qualities. We must acquire them through effort; we must be carefully guided and taught by home, church, and school. Hence the over-riding importance of education in a democracy, education which enhances the human personality--not narrow vocational training to equip young people with a saleable skill--for in a democracy people are much more than mere breadwinners.

What is often lost sight of is that while technological progress lightens the burden of earning one's daily bread, it simultaneously increases the burden of democratic citizenship. Life becomes complicated and artificial. National principles must be constantly adapted to new circumstances if they are not to become a dead letter. Equality, for example, is one of the basic democratic principles which we are currently applying to public education in a manner which tends to defeat the whole purpose of education in a democracy. We seek to level children

into homogeneity by forcing identical education on all, regardless of whether this really educates them or not. Obviously, children have different mental capacities, different motivations, and different speeds of learning. If we lump them together in huge comprehensive schools, we do justice to but the tiny minority exactly in the center of the ability scale. We are thus using a public agency--the school--to undo the inequality of intellectual power conferred on us by the Lord.

It strikes me as somewhat blasphemous to do this. The only real equality is equality of opportunity; that is, the lowering by society of artificial barriers which would prevent a child from obtaining the best education he is able to absorb. This is what the European democracies have long since provided for their youth. Sensibly, they realize that education is not a material thing, or a prestige item that must be handed out in equal doses, since it is valueless unless the receiver is willing and able to benefit by education. Yet in this country we still brand European education as aristocratic and we wax indignant at their practice of sorting out children by ability and giving each the kind of education he is best able to absorb.

In order to preserve a narrow and mistaken concept of democratic education, we are currently depriving many of our talented, and almost all our average children, of the benefits of general or liberal education which enhances man's stature and therefore enables him to live a fuller, more interesting, and

more satisfying life. Because we cannot impart this general education to all children simultaneously, we have downgraded curricula in the direction of what are termed "common needs of youth"--vocational training, and the teaching of manners, leisure time skills, and the like. These do almost nothing to prepare youth for the demands of the twentieth century, either in their private lives or in their role as democratic citizens. These courses do not "bring the mind into form," to use the words of John Henry Newman in which he expresses the objective of general as opposed to vocational education, or what he called "entertainment" education--teaching good grooming, how to fish, or how to be socially popular, for example.

In aristocracies, the value of general or liberal education has always been well understood by parents belonging to the groups that provided national direction and leadership; so well that almost all their children managed to acquire it. Those of average ability did so by dint of parental encouragement, coaxing, help, and sometimes compulsion; by hard work and, when necessary, repetition of grades. Somehow they acquired a liberal education and it was well worth the effort and the occasional heartbreak of individual failure. Parents did not make the mistake so common with us of leaving to the children themselves the planning of their education. It is nothing but maudlin sentimentality and an unrealistic notion of the child's "democratic rights" which keep so many of our children from acquiring the solid

advantages of a broad general education.

The law everywhere recognizes the limited judgment of minors and protects them against their own immaturity but in American education we not only fail to protect the minor against his immature desire for easy, snap courses, we actually seduce him into abandoning the effort to reach the highest possible human stature he can achieve by offering a veritable cafeteria of tempting dishes requiring no effort at all on his part, and especially little or no homework. These "easy subject dishes" also have the so-called "advantage" that they do not show up mental inequalities as do those of the liberal arts curriculum; (also, they are easier to teach!)

We make a mockery of the noble concept of universal free education when we eliminate from education everything that spurs the child to effort. It is official educationist dogma that "there is no aristocracy of 'subjects'...mathematics and mechanics, art and agriculture, history and homemaking are all peers." All win for the pupil the same credit toward his final diploma or degree; all are open to every pupil regardless of his ability. Thus do we eliminate competition and reward from the child's most important business--growing up to be a worthwhile adult. In every other human activity we recognize that people do their best when they are challenged by competition. We know that effort will bring reward. Not so in education. Here we actually pride ourselves on sparing the lazy and the stupid child the

disappointment of failure. To save the sensibilities of the incompetent, we neglect the talented. And even the average child with sufficient motivation to absorb at least part of a liberal education all too often misses out because he has not been properly guided and spurred on to exert himself.

Today's effort to wrap children in cotton wool and protect them against every risk of school life contrasts with the way children were raised in pioneer days. No parent would then have dreamed of sparing his son the risk of possible accident by not teaching him how to shoot a rifle. Survival in pioneer days depended on being a handy shot; the risk of a child hurting himself had to be taken. Today survival depends on ability to raise one's intellectual capacities to higher levels than were ever before needed; yet many American parents will not accept the risk of their child hurting himself by failing in a tough curriculum. Ability to think is as important today as ability to shoot was yesterday. Although our folklore has little admiration for the pampered child of rich parents, now that most of us are rich beyond the dreams of people elsewhere in this world; richer by far than most ruling classes were a few generations ago--now we engage in that very pampering which we once scorned.

A peculiar sense of logic permits us to award the star athlete all sorts of honors, thereby motivating him to practice hard and continuously; while to do the same for children of superior intelligence and scholastic achievement is "undemocratic,"

so we are told. We like to think of ourselves as a practical, realistic people. Yet we cherish athletic prowess for which there is limited use in today's urban life and we deprecate intellectual prowess of which we have too little and need a great deal.

We want our children to lead a happy and rich life but instead of teaching them to develop their inner resources we waste their best learning years on training them how to be socially popular and how to find a mate. Much of the "entertainment" type education given in our schools could well be given after school hours and at the expense of the interested families. I am old-fashioned enough to feel that taxes ought to be invested in educating children for real life and not for having a good time.

In setting educational objectives, one may take the view that these must achieve what is best for the individual, or one may take the view that they must aim at what is best for society. In democracies, fortunately, that education which enables the individual to make full use of every one of his abilities because all have been developed to their maximum potential - that education also prepares him best for democratic citizenship. There is much talk in educationist circles about educating the "whole" child but unfortunately this is interpreted as education which tries to take on the entire development of a child in the short 180-day school year prevailing in this country. This is

an impossible objective and must end in developing no part of the child's abilities properly, and in giving him merely a smattering of unimportant know-how.

Bacon said that the mind of man is the man. If the schools concentrated all their efforts toward developing the power of the child's mind, allowing only necessary time to developing his physique, giving him a taste of music and art, and implanting good principles of conduct, they would in fact be going far toward developing the "whole" child.

A "whole" man uses all his faculties - none lie fallow. Nothing makes life so interesting, so invigorating an adventure, as when we bring all our abilities into play. It must be that we were meant to be "active souls" - to use Emerson's famous phrase. If we do not all live this way it is because the general education which develops all our capabilities is acquired only by great effort. It is seldom possible for a child to assess the value of a good education, and by himself decide to acquire it. But we, the people, can demand that our schools do everything in their power to guide the child toward such an education. For so good a purpose, we may properly use every means of persuasion, including the child's natural competitive instincts. We may decide that our taxes should not be spent on teaching children to set a table or order a meal in a restaurant, but should be used only to impart education which develops the child's total personality; education which, in John Ruskin's words, "is the

leading of human souls to what is best, and making what is best out of them; and these two objects are always attainable together, and by the same means. The training which makes men happiest in themselves also makes them most serviceable to others."

My tour of duty in Washington, and the many years I have been at work trying to develop a new source of energy, have taught me one thing above all: Nothing worth having is ever acquired without great effort. We tend in this country to accept passively the good things which science, properly exploited, can give us. We do not always realize that we must in turn give something ourselves to insure that scientific progress continues. This something is the effort to raise ourselves to higher levels of intellectual power and disinterested wisdom. There will be no room in the new world which is just around the corner for citizens--or nations--who are mentally lazy, selfish, or uninformed. As we move up the ladder of civilization, we must increase our over-all competence.

Roughly the sequence is as follows: first, man needs physical strength and courage, and in pioneer societies these suffice for success in his personal life and as a democratic citizen; then follows practical ability in handling concrete problems and utilizing novel techniques for exploitation of natural resources and production of industrial goods; finally comes ability to grasp abstract concepts of increasing complexity. As he moves up the ladder, man does not discard the earlier competencies

but merely adds the new ones. In consequence he rises to a higher level in his total humanity.

Today our national mores and the dogma of educationists that all subjects are of equal value tend to obscure the fact that one of the great advantages of reaching a higher level of education is that one escapes the narrow confines of a single skill. The engineers in my group, for example, are able to do extremely difficult design work, but they are also capable of doing the work of technicians and mechanics. Consider the person who has received a broad liberal education: he has been taught no special vocational skill but the training he received has made a precision tool of his intellect which equips him for the study of any number of professional subjects. "In all," wrote Newman, "what is gained by a liberal education is a faculty of entering with comparative ease into any subject of thought, and of taking up with aptitude any science and profession." A person's native ability naturally affects the extent to which he ca make use of his mind, but whatever his I.Q., a broad general education will increase his mental capacity well above what it woul be if he were merely given vocational or "entertainment" type education.

The importance of general education for all the people tends to be obscured because of the fact that its value is personal and civic and not obviously utilitarian. We do not recognize its value if we think of education as having no other purpose than to increase our earning power. Looking at education in this

narrow--almost mercenary--way, we do not readily understand the interrelation between technological advance and greater need for higher educational levels. It is quite true that for the majority of people it is now much easier to earn a good living than, let us say, fifty years ago. Most people need fewer special vocational skills and will need still fewer when automation takes over. Routine work is gradually being taken over by machines. People are still needed to manipulate these machines, but little in the way of education or specific skill is required of them. We like to think that pushing buttons that start and stop machines is a more dignified way of making a living than working with one's hands. No doubt it is pleasanter and physically less fatiguing. But in the past when men worked with their hands, a good many of them had to have special abilities and skills which set them apart from others and gave them importance. Workers in preindustrial societies had to possess more special knowledge and skill than today's machine tenders.

Consider the deep understanding of nature, of soil, of plants and animals needed by a peasant; how carefully he must plan for the future. Consider the artisan who must spend years preparing himself for his particular trade. Such skilled men are set apart from each other by their special abilities; they are never "interchangeable men," to use Robert Hutchins' term. Modern man, however, tends to become merely a cog in a huge production machine. Whatever vocational skill he needs can

usually be acquired on the job in a relatively short time. This skill has been deliberately whittled down to a level where practically everyone can attain it easily. There is no special satisfaction to be gained from such a meager skill, other than that it provides a good living for few hours of work.

When we substitute vocational training for general education in our schools, we treat human beings as breadwinners pure and simple. We leave out of consideration their needs as persons and as citizens. This is an attitude often found in authoritarian societies but it has no place in a democracy, particularly one as rich as our country which can well afford to provide all its children with a good general or liberal education. Though it is not highly regarded by authoritarian governments, the independence of mind which such an education develops is indispensable in a democracy. Substituting vocationalism for general education cheats a child of his right to become a well-educated person. Let us by all means provide for all sorts of extracurricular activities which may be pleasant or marginally useful to children; we can use the school buildings for this after hours. But let us not substitute typewriting, metal shop or driver training for history, languages, mathematics, and sciences. Vocational skills were deemed sufficient for the hewers of wood and the carriers of water in times gone past; they are not sufficient for future democratic citizens.

How better can we use the wealth and the leisure which

technological advances give than by investing them in a concerted campaign to provide our children with the best schools and the best educated teachers in the world so that all future American citizens may absorb as much of a broad liberal education as is humanly possible. Is there a worthier goal we can set for ourselves than to help America's youth become the most intelligent, the most competent, the most patriotic, and the wisest of rulers of this land of ours?