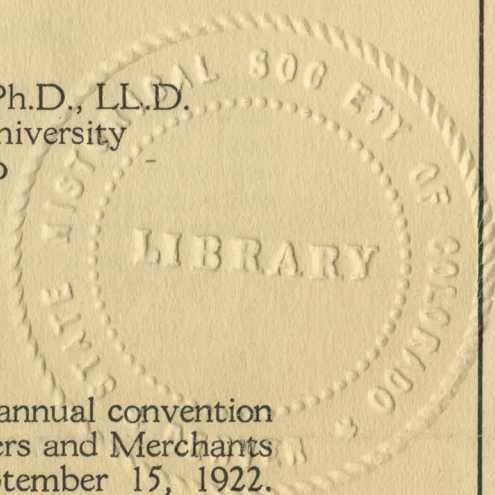


Are We Spending Enough on Education?

BY GEORGE NORLIN, Ph.D., LL.D.
President of the University
of Colorado



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Mr. President, Ladies and Gentlemen:

I count it the greatest as well as the happiest privilege of my life that I am connected with what you have called, Mr. President, one of our great manufacturing institutions—an institution which you have recognized by the invitation to which I am responding tonight as having its important part in the development, in the building up of so wonderful a state as ours.

I want to speak to you as briefly as I can—for the hour is getting late—on the significance of a remarkable phenomenon of our national life today. I mean the influx of unprecedented numbers into our schools and universities. I may illustrate from my own experience. We sent out this year as many graduates from the University as there were students in all classes in the University when I cast my lot with it some twenty years ago. In those twenty years the population of our state has hardly doubled, while the University has grown in numbers approximately ten-fold. And in the last five years, while the population of our state has increased but little, the population of the University has almost trebled.

This is, it is true, somewhat exceptional. But Governor Ammons here could tell you a similar tale of the Agricultural College, and Miss Griffith has just told you that this year one thousand people have been turned away from her unique Opportunity School for lack of room. All along the line in our universities, in our technical schools, in our public schools, the attendance is growing more rapidly than the general population. And, mind you, this is something more than the release of a flood upon us immediately after the dam of war conditions broke; every year now there are more and more people going to school, more and more going to high school,



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more and more going to our colleges and universities; and the income which was barely sufficient to maintain our schools five years ago, two years ago, one year ago, is sadly inadequate today.

To those who are in charge of the administration of our schools the situation is at once inspiring and alarming. How is the problem to be met? Many there are, especially in these times when people are smarting under the burden of taxation, who feel that too many are going to school, too many are going to college, and that we are spending too much money on education.

Now, ladies and gentlemen, if we were spending in this country anything like as much upon education—upon our national defense against the danger of ignorance, of intolerance, of prejudice, of unsound and destructive ideas—as we are spending upon our defenses against external, physical aggression; if we were paying anything like as much for all our educational institutions, public and private, lower and higher, as we are paying for the tobacco which we blow up in smoke, I should be inclined to pay serious attention to this complaint.

But as things are, and living as we do in a world which many think is speeding to destruction, and in a society which is even more threatened by disintegrating forces from within than by any danger from without, I wonder whether we are spending enough on education, whether there are enough people going to school, whether that old legislator does not justly deserve his title of "wise man" who said that the chief business of the state—the chief, mark you, and the most important—is the business of education.

"The times," we say, "are out of joint." But in so speaking, we flatter ourselves. It is we who are out of joint with the times; it is we who are behind the times, who are not educated up to the times in which we live. Or, perhaps, I should say that we have not kept up with ourselves. We have advanced too rapidly in some ways and not enough, if at all, in others. We have advanced incredibly in our ability to manipulate and control the forces of nature; but in the matter of intelligence, in the matter of morals, in the matter of self-control, in

the matter of social responsibility we have made no comparable advance.

We are living in the midst of the greatest revolution of the world. We are hardly aware of it because we are so much of it—just as a fish is unconscious of the element in which it has its being. We think little of its beginnings and still less of the fruits which it will bear; yet there has been a greater transformation in our habits of life since Napoleon's day than there was in all history before his time. Since the discovery and use of coal and oil and steam and electricity, there has been a tremendous acceleration of speed in every department of life. All of that speeding up has come about in a hundred years; most of it has taken place in the last quarter century.

Do you recall that the battle of New Orleans—the bloodiest battle of the War of 1812—was fought two weeks after the articles of peace had been signed at Ghent, because it then took weeks to get news across the Atlantic? And do you recall that a hundred years later, in 1918, we celebrated with a wild orgy of joy the armistice of the World War two days before the articles were actually signed?

A century ago, it took five days to go from New York to Boston, while the other day one of our aviators made the trip from the Atlantic to the Pacific in less than twenty-four hours.

The other day I took an old gentleman—a New Englander—on a drive through the mountains. When we returned we found that our little excursion—and we had taken our time—had covered one hundred and fifty miles. He said to me: "Do you know that my father used to boast, and was a man of distinction among his neighbors, because once he had made a journey of a hundred and fifty miles?"

These are but a few examples of the progress which we have made—a progress which is marvelous when you think of it. And yet it is a question whether that progress has been altogether good for us, or rather whether it has not been too much of a good thing for us. We have not adjusted ourselves to it. Our brains, our consciences have not kept

pace with a life that is forever noisily and restlessly on the move. We have hitched our wagon to a star, not in the Emersonian sense, but in the sense that we do not propose to let moon or planet or any other moving thing pass us on the road. We are intoxicated with motion; we are mad with speed. And this frenzy governs us not alone in our goings and comings in a whizzing world, but it enters into our moral ideals and even our religion. We do not admire in our neighbors any more such old-fashioned virtues as sobriety, steadiness, poise, and self-control. No, if we want to really compliment a man we say he is a "live wire"; we say he has "zip" and "punch" and "go"; and the god whom we popularly worship is the great god "Pep"!

We are drunk with speed, and we are drunk with increased power. I am, I suppose, still a young man, and yet I can remember when a man with his own man-power and the power of two horses or two mules had a good start in the world. Today the man who doesn't own at least a Ford engine simply isn't anybody. The energy which we have and use through the infinite variety of machinery driven by steam and gas and electricity is probably a thousand-fold greater than that which men possessed in the time of Washington. We have stolen the secrets of the gods; we are hurling the thunderbolts of Jove. And we are just at the beginning. We stand perhaps on the threshold of the discovery of how to use a new kind of energy which will make the energy of coal and oil and all that sort of thing seem like a back number. Some twenty years ago Madame Curie discovered radium, and since then our scientific laboratories have found a host of radioactive substances. What is a radioactive substance? It is one which by the gradual breaking up of its atomic structure keeps giving off heat or energy. A given quantity of radium, for instance, will, through a long period of disintegration, estimated at over two thousand years, gradually give out a quantity of energy a million times greater than that contained in the same quantity of any ordinary substance known. No one has as yet discovered the key to unlock that power; but if that discovery is made—and Professor Soddy of Oxford University says we may stumble upon it any day—if, in other words, we learn the secret of releasing at will the tremendous energy

which is locked in the atoms of matter, as we now release at will the energy of coal or of dynamite, we should have at our command a store of energy with which we could either transform the world or blow it into smithereens. As things now are, we would probably blow it into smithereens, thinks Professor Soddy, and therefore he hopes that this discovery will not be made in our generation. We are not ready for it; we are not educated up to it. Nay, we are not wise enough, we are not good enough, we are not responsible enough, we are not grown up enough to use the power which we have to good purpose. We are like children playing with fire.

We used to boast of the high level of intelligence in our country; we have rested secure in the superstition that our mental and moral capacities have advanced with the achievements of science and of the applications of science. Now we are not so sure. Indeed, we are not sure at all. During the Great War, we tested, by the most thorough means our psychologists could devise, the intelligence of almost two million of our drafted men—a great cross-section of our population, presumably better, certainly not worse than the average—and what did we find? That thirteen and one-half per cent. of them were of "superior" intelligence and forty-seven and three-tenths per cent. of them were of the mental age of thirteen years. Think of it! Almost half of us in this country are of the mental age of children of thirteen and yet we are handling forces which would have staggered the imagination of Benjamin Franklin to think of in human hands and we are perhaps on the threshold of grasping a more than superhuman power!

Is it any wonder that there are wise men who look into the future with alarm; who feel that it avails us little to have speed if we end in the ditch, or to have power if we use that power for our destruction; and who warn us that we are shaping our civilization into a monstrous machine which will crush us all?

Now I am not an alarmist any more than you are. But these are things worth thinking about. We could not, if we would, slow up the world; we could not, if we would, turn man back from the dominion which he has won over the forces of nature. Man will con-

tinue in his conquest of power. The question is whether, while so doing, he can be made to advance equally in his conquest of self—in understanding, in moral insight, in social responsibility.

At any rate, it would seem worth while for us who are here tonight, gathered here because we are concerned with the commercial and industrial development of our great state, to give thought to the fact which is so obvious, yet so easily overlooked—namely, that our prosperity and well-being, nay, our very security, depends first of all upon the quality of our output in men and women.

Let me close by asking now the question which I raised in the beginning: Are we spending enough on education?

