

## TECHNOLOGICAL CHANGES IN THE U. S. AND NEW MANPOWER NEEDS

BOB COAR: This is Washington, and this is Senator Hubert H. Humphrey of Minnesota. Today the Assistant Majority Leader reports on a significant and critical challenge facing the U. S. Now here is Senator Humphrey.

SENATOR HUMPHREY: Well, thank you. And, yes, there is a very significant and critical challenge facing the United States, and at the same time it is a great opportunity, just as some people interpret it as a serious problem. What do I refer to? I refer to the growth of our population, I refer to the impact upon our economy, and upon the population of a technological and scientific advances. We call this automation when it comes to manufacturing and to production of goods and services, and I refer, of course to the whole meaning of economic growth, and what economic growth means in terms of job opportunities, and economic advance and prosperity for our country.

Now this isn't the kind of topic that you can deal with in just a very few moments, that is in depth. But you can at least skim the surface, one can get a sort of picture of what is going on if you just spend a few minutes in observation and study of the certain key statistics.

Now, just let's take a look and see what's happening. One, our country is a growing country population-wise. Each year better than a million new workers come into the labor force. Now if we didn't have any changes at all in terms of our technology, and if there were no effects from scientific progress, we still have to find about 1,200,000 jobs a year. But in the meantime, we have changes in our technology. Everybody knows that workers are being displaced by machines. Production is being increased and expanded by machines. There is a high degree of obsolescence in machines. There is a constant change in the production methods; not long ago during some hearings that I was conducting on this whole subject of the impact of science and technology on our economy and on the individual lives, I heard some startling testimony. And I am going to share some of that with you today in the hopes that it might bring home some of the challenges that we face for the future and why we simply must look ahead and make some plans. We cannot afford the luxury any longer of just hoping that everything will come out alright. Things are moving too rapidly, there is far too much interdependence in our economy to permit things to run haphazardly. What effects one part of America, will effect all of it. So we need to take a good look ahead. Futhermore, we Americans and this nation must stay strong economically, politically, morally in order to provide the leadership the free world needs in these critical days, yes, these critical years for the foreseeable future.

Well, I'm going to refer to some notes now, because when you deal with statistical evidence you ought to be accurate. And I have testimony from Dr. Wolfbein of the Department of Labor, the United States Government, as well as from some of the outstanding economists of our great university. We have been holding, as I said, a remarkable hearing, very very interesting. Regretably very little publicity about this, I guess it's because we have ~~XXX~~ not accused anybody of anything. We have more or less been studying, and when you go into an area of scholarship or study, it all too often doesn't make the news. But here is some startling news, just look at this! We're going to have to have starting 1970, 300,000 new jobs every month. Now that's a lot of new jobs. Automation will effect 22,000,000 jobs by 1970. Now that means about 2,200,000 jobs every year in the 10 year period between 1960 and 1970. Then you add on to that the population growth and you get a figure that comes up around the 34-35,000,000 of jobs. This is what we have to provide in this ten year period. Here's another way of putting it, and I want to just quote from what was in the testimony. "This year technology is affecting all areas of our national life. Fewer people are needed to produce what our people need--the most staggering and awesome result in the number of jobs and the types of jobs we will have to have to create for a rising population and for people thrown out of work by automation. Right now, we need 300,000 jobs every month, and by 1970 we will need to create an additional 35,000,000 jobs. We find, for example, that we're able to produce by 1970 all

that we need; or let us put it this way, we will be able to produce as much in 1970 with 22,000,000 fewer workers than we used in 1960. Now the emphasis is on jobs and becomes very very important. Now let me just relate this to another aspect of our economy---agriculture, because this is close to us out home in Minnesota. In 1870, one farmer or farm worker produced enough food for  $5\frac{1}{2}$  people. By 1940, one farm worker produced enough food for 10-11 people. Now that was a substantial increase which about doubled in that 70 year period. Now get this in 1960, one farm worker produced enough food for twenty-seven people. Technology, science, fertilizer, yes, and machinery and food methods of production, education, research, all of this had an impact so that in the period from 1870 to 1940 a 70 year period you doubled food production per worker. Between 1940 and 1960 in the war years and the immediate post-war years you went from  $10\frac{1}{2}$  workers,  $10\frac{1}{2}$  persons up to  $27\frac{1}{2}$  persons for one farm worker. Now, the one farm worker could feed that many. This is the most fabulous pace in production that the world has ever known. Each month, I should say each year, there are approximately 200,000 farm men and women, or men and women from our farms going into the city. This is due primarily to technological changes. Now, so you're getting an urbanite society. And you are getting an automated society, and you're getting a society that is under the heavy impact of science and technology. Now all of this ought to be for the good, but it poses some real problems.

Of course, it advances our standard of living, but it has left us with a hard core of unemployment which regrettably seems to be growing each year. And it faces us with problems in the immediate future that are staggering. Let me give you an example: the war babies are becoming of age now. This year there were over 1,000,000 16 year olds, there was one million more 16 year olds than any other time in our past history. This was the crop of babies born in 1947. And next year there will be more. And the rate of unemployment amongst our young people is going up. This is a serious problem. You cannot afford to have these restless, energetic young people without gainful work, without a place to use their efforts, and their energy. Now this get right back to a subject that has been close to my heart all the time, because the statistics reveal the truth of what I am about to say, namely; that education is the answer. America ~~NEEDS~~ doesn't just need muscle power any more, we need brainpower. The number of unskilled workers required today is diminishing. The number of workers on farms is diminishing. What we need is a sort of updated, upgraded skilled and semi-skilled, and professional persons. And education is the answer. Let me show what I mean. Two out of every three people presently unemployed have less than an high school education. And the number of unemployed college-trained people is really insignificant. It's so small that it is hard to describe it in statistical terms. Let me just put it this way. The unemployment rate in April of 1963 was 12.9 or about 13 per cent for unskilled workers, and 1.7 that is 1 and 7/10 per cent for

professional personnel. The unskilled labor rate was  $2\frac{1}{2}$  times as high as the corresponding rate for skilled craftsmen. It all boils down simply to this---that if you don't have an education, you're behind before you get started. And it all settles down to something else, America must improve its educational structure. Higher education---colleges, universities, we are going to have tremendous numbers of young people coming into our schools. We are going to have to improve on what we call our secondary education, our high schools, and our elementary, and above all our vocational and technical educational ~~EDUCATIONAL~~ system must be updated. There is something wrong with American education when we have so many school dropouts; when we have approximately 1,000,000 boys and girls between the ages of 16 and 20 who are school dropouts, who are unemployed. There is something wrong. And I think that educators had better re-examine their educational structure. And we who are parents and public servants had better take another look at it. Education has to provide something more now than just academic training. It must provide a work experience, it must provide a kind of work discipline. Young people don't have the chance any more to work in their father's drugstore, or on their father's farm, or in their father's garage, or in their father's department store. It's a different day and age, and therefore, it is imperative that the educational structure not only train the mind and enrich the spirit, but also that it keeps some habits of work, and work discipline, and responsibility, and reliability and skills and

semi-skills, because we are beginning to need more and more people in the "white collar" class, in the services, beginning to need more and more skilled people, and fewer unskilled. Here was a figure the other day that was quite important---in 1900 85 per cent of the young people, of what we call the high school age, they had no high school education. You didn't go to high school in 1900, in 1960 eighty-five per cent of the young people did have a high school education. A high school education is the minimum and I don't mean just getting into a high school, I mean a good high school education, and as I speak to you now let me say that every one of us has an obligation to see to it that every young man and woman that has the desire for higher education, or college, junior college, community college, four-year course, professional courses, that these young people get these courses. Why? Not just to help the young people, but to help the whole nation. If we are going to be able to deal with results of science and technology and we are way out in front in sciences and technology, we are going to have to have sharper people, we are going to have to have people who are more accustomed to urban life that can work with the achievements of science and technology and can contribute to them. And this means brainpower, investment in education. Let's take a look just in this last moment here at this whole picture of civil rights, and the abuse of civil rights. What's happening? Thousands and thousands of our fellow citizens---Negro Americans---have come from the farms of the

South, and they come into the big cities of the North, they have had no experience in industry, little or no education, no background in urban living and they are lost. And even though we may pass law after law to guarantee civil rights, what is really needed above all is education for jobs, equipping one's emotional, physical, and intellectual life for urban living. And for industrialized society. And this is why some of us encouraged President Kennedy, and I was one of those, in those meetings at the White House, encouraged the President to emphasize education, technical education, vocational education, academic and adult education, so that these young people could catch up, because the rate of unemployed amongst our colored is much higher than it is amongst the white. And why? Because they were denied equal opportunity of education, equal opportunity to learn. So let's close that gap, and let's do it quickly.

Well, there is so much that could be said, and little time to say it in. I am only trying to emphasize that we have a problem, that we have a challenge, and we have an opportunity, and we can answer this with planning and with education.

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