THE STRUCTURE OF AMERICAN INDUSTRY

17 January ~~1955~~ 1956

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Washington, D. C.

Mr. Kenneth R. Miller, managing director of the National Association of Manufacturers, was born in Fayette County, Pennsylvania. He attended Emerson Institute, Washington, D. C., and George Washington University. In 1926, he began a fifteen-year career in management as a sales executive, and later as consultant in advertising, public relations and sales training. He was appointed the first managing director of National Sales Executives. During World War II, Mr. Miller served with the War Production Board as assistant to the WPB Program Vice Chairman. He was appointed assistant to the executive vice president of the National Association of Manufacturers in September of 1943. In 1945, he was elected treasurer and business manager, and in 1947 was made vice president in charge of member relations. He became NAM's senior vice president in February of 1953, and managing director in October of 1955. This is his first appearance at the Industrial College.

Mr. Marshall G. Munce, Vice President, York Corporation - Production Aspects, was born in Richmond, Virginia, 12 September 1896. He attended the Virginia Military Institute graduating with an A.B. in 1917. After serving in World War I as a Second Lieutenant in the Field Artillery, he entered the Massachusetts Institute of Technology where he obtained his B.S. in mechanical engineering. In the fall of 1921 he joined the York Manufacturing Company specializing in Sales and Sales Engineering. In 1937 Mr. Munce was transferred to York's British manufacturing subsidiary, York-Shipley, Ltd., London, as Managing Director, which position he held until mid-1940. Upon his return to this country, he became Special Assistant to the President and organized York's participation in special munition and war work. During World War II and again during the Korean War, Mr. Munce served on the Government Industry Advisory Committee for the air conditioning and refrigeration industry, as well as the Government Relations Committee for the industry's trade association. In 1948 Mr. Munce became Vice President of York Corporation in charge of Public and Trade relations. In October 1954 he became in charge of marketing services, which includes public relations, trade relations, institutional advertising, market research, and policy relations with the Government. Mr. Munce is presently a Director of NAM and Chairman of NAM's Industrial Problems Committee. This is his first appearance at the Industrial College.

Mr. Ernst Watson Farley, Jr., President and Director, RECO Tanks, Inc., Vice President and Director, Steel Service, Inc. - Government Controls, was born in Richmond, Virginia in 1912. Attended Virginia Military Institute, graduated with a B.S. in Electrical Engineering in 1934. Employed by E. I. DuPont de Nemours and Company in the Construction and Power Department at Spruance Plant in Richmond from June 1934 to November 1935, when he joined Richmond Engineering Company, Inc., - Chief Engineer and Vice President. He entered the Ordnance Department, U. S. Army in 1942, serving in the Engineering-Manufacturing Branch, Office, Chief of Ordnance, Detroit, Michigan. Rejoined Richmond Engineering Company, Inc., in June 1945, as Vice President and General Manager, until April 1953, when he was elected President and General Manager of the company. He is Vice President and Director of Steel Service, Inc., and affiliated companies, President and Director of RECO Tanks, Inc., of North Carolina and South Carolina. Mr. Farley is a past president of the Richmond Section, Virginia Manufacturers Association; Vice Chairman of the Industrial Problems Committee of the National Association of Manufacturers; Chairman, Statistics Committee of Steel Plate Fabricators Association. This is his first appearance at the Industrial College.

Mr. Carl T. Hoffman is a partner in McKinsey & Company, Management consultants. Mr. Hoffman joined the consulting firm in 1943 and makes his headquarters in the New York office. Before his association with McKinsey & Company, he was with Bendix Aviation Corporation (Marine Division) and, previously, the Seth Thomas Clock Division of General Time Corporation. Before obtaining his M.B.A. from the Harvard Business School in 1932, he attended Cornell University, graduating with an M.E. in 1930. This is his first appearance at the Industrial College.

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GENERAL HOLLIS: We are privileged this morning to have the National Association of Manufacturers sponsor our first lecture in the Production Unit. There will be a panel discussion this morning. The NAM felt that the subject deserved full treatment in its different segments by their specialists.

As the initial speaker we will have the Managing Director of the National Association of Manufacturers, Mr. Kenneth R. Miller, who will introduce to you the other panel members as they are to speak.

The NAM needs no introduction to this audience. It has a membership of 20,000 manufacturing companies in its organization and represents a tremendous force and influence in the American scene. It is a great pleasure to me to introduce to you Mr. Miller and his group.

MR. MILLER: General Hollis, Gentlemen: It is a very real pleasure for the representatives of the National Association of Manufacturers to be with you here today. We appreciate very much the invitation and the opportunity to share in this program with you. I hope you were not overwhelmed by the numbers that you saw in our group coming in here this morning, but it seemed to us that the broad subject that you had assigned to us was of such importance that it warranted this attention, not only by the staff of the association but by members of the association who are themselves on the firing line.

My part in the opening presentations this morning will be to give you a very brief picture of the structure of American industry, to serve as a backdrop or setting of the stage for the specialized talks to be presented by the other speakers in the panel. It is our honest intention to confine the lecture portion of this session to a total of 45 minutes, after which we hope to have an interesting and constructive discussion.

When I first came to the NAM in late 1943, two years had passed since Pearl Harbor. I can remember very well--as will every man in this room today--the Herculean task that American industry had already performed in those first two years of our active participation

in World War II. In those fateful 730 days after Pearl Harbor, the early trickle of United States arms output had become a veritable flood to overwhelm our enemies.

The total physical output of American industry at the end of 1943 was more than double what it had averaged in 1939, and most of that increase was in hard goods. Never in our history had such a spectacular increase in production been witnessed.

Recounting such achievements of the past is impressive and reassuring, but there is something more than the so-called "miracle of production" in the job that was done in those years of world conflict. One hundred fifty years of free enterprise in this country had created the greatest productive machine that the world had ever known.

This machine that gave us our great national strength in time of war also brought us the highest standard of living in peacetime ever known to man. And the developing of this machine over the decades gave American management the "know-how", the skill and the experience to turn industry into an invincible instrument of destruction--the arsenal of democracy.

Free American managers and free American workmen, with the priceless ingredient of "know-how", converted and retooled old plants, built new factories and even new industries to out-produce all the regimented economies and slave labor of our enemies.

Of course American industry today is a vastly greater machine than it was in the last world conflict. We used to think that the plant expansion which occurred during the war (much of it through Government financing) was a tremendous thing. So it was, at the time. But since the war, American industry has duplicated that feat (with private funds) several times over. The manufacturing industry alone has spent on new plant and equipment since 1945 almost 100 billion dollars for improvements and expansion of all kinds.

The rated capacity of American industry as a whole is estimated to be nearly twice as great today as it was when World War II ended. And plant capacity, as you know, is actually a very flexible thing, especially in times of dire emergency.

Today we have more than 300,000 manufacturing firms in operation in the United States. American industry now employs about

17 million wage and salary workers. This is more than 25 percent of all the people that work in America. And more than 13-1/2 million of these workers in industry are directly in the production line.

How big are these 300,000 manufacturing concerns? Some idea of their size can be obtained from the fact that all but a few thousand of them have less than 500 employees each. At the other end of the scale, only about 600 establishments have more than 2,500 employees. Thus we have a vast network that ranges all the way from the top producer, with about 12 billion dollars per year of output, down to the five-hundredth largest producer, with about 50 million dollars per year of output, and then a numerous and widespread network of smaller producers.

Where are these numerous manufacturers located? They are--just as they have been for many years--most densely distributed in the Northeastern and Central States, the west coast, and the Southeastern States, clear over to Texas. This does not mean that other states are not important, but only that industry in the other states is more widely scattered.

Industry is a tremendously interdependent thing. This interdependence exists not only as between plants of various sizes and types, and as between whole industry groups, but also between other major industrial and economic sectors of the economy, such as the great power companies, the whole field of transportation and communication, the construction industry, mining, the service industries, and the vast fields of wholesale and retail trade.

The Nation's economic activities may be grouped or classified in many ways. Perhaps the most concise subdivision that I know of was stated by an outstanding group of economists as follows: 25 percent of our gainfully employed persons are engaged in producing raw materials; 25 percent in fabricating these materials; 25 percent in distributing them to consumers; and 25 percent in performing a variety of other services.

Our system is primarily competitive, on a private profit-or-loss basis, and FREE--within limits of laws enacted by representative government.

Now what I have said, Gentlemen, merely sketches out a few key highlights of the physical structure of American industry. The more specialized part of this session is about to begin.

I take pleasure in presenting to you the first of our three participants this morning, Mr. Marshall G. Munce, Vice President of the York Corporation, York, Pennsylvania, which manufactures refrigeration machinery. He is also chairman of NAM's Industrial Problems Committee, a member of the Board of Directors, and a member of the Public Relations Advisory Committee. Mr. Munce will outline to you this morning some of the implications of our advancing technology, with emphasis on automation and its impact on the economy. Mr. Munce.

MR. MUNCE: Gentlemen, I want to apologize for sticking strictly to notes and to prepared remarks. I don't like it and I know you don't like it, but with the limits on time here this morning I felt it was the only thing to do.

Obviously, in a brief period it is quite impossible to cover all facets of production, including research and development prior to or incident to production. We will, therefore, confine ourselves to a few highlights on this very important factor in our economy.

Production of a product is by definition the manufacturing of that product. Actually, however, there are several important steps of planning and preparation before the material or materials ever reach the machinery through or over which they are processed.

Upon receipt of an order accompanied by a complete set of drawings, specifications and/or bills of material, the manufacturer generally has to develop parts drawings and detailed bills of material on which are placed complete information for the manufacturing processes. These drawings and bills of material must then be studied by the manufacturer's production or industrial engineers to determine those machines or facilities to be used in manufacturing the item, and required special tooling, jigs, dies, fixtures, and gages. Frequently this study results in the establishment of a requirement for additional machine tools or facilities because of the rate of production, because of the complexity of the operations to be performed, or because of the allowable tolerances in producing the part or item. In such cases the additional machine tools and/or other equipment must be secured and installed before production can begin, and in any event the necessary special tooling, jigs, dies, fixtures, and gages must be secured.

Paralleling this study must be a study of available sources of supply for the material or materials and components from which the

item is to be manufactured. If the item is to be made from materials or components normally used by the manufacturer, this is generally a relatively simple problem. But if there are items of material not normally used by the manufacturer, sources of supply must be found and investigated for reliability, quality of product, availability, etc.

Through coordination, generally spoken of as production planning, the date when facilities will be available, including new and additional equipment, and the date when material will be available, are determined, and the date for starting production is established. It may be necessary to recruit or reassign and train manpower to man and operate the equipment to be used, so availability of manpower must also be studied.

What we have attempted to emphasize in the brief recital we have given you of the steps preceding production is the time requirement that follows a decision to place an order or give a go-ahead to a manufacturer, before actual manufacture of the item can be started.

Unless the item to be produced is identical with or varies very little from items normally produced by the manufacturer, initial production must of necessity be at a slow pace until quality of production and acceptability of end product has been established. This is generally accomplished by a small group of highly skilled workers who are subsequently used in training others to specific tasks. From intimate experience we can tell you that, unless initial production proceeds in a careful and closely supervised manner, a lot of time and materials are apt to be wasted before an acceptable end product is attained. Preferably, initial or pilot production should be followed by a gradual increase in production, such a process being the best insurance for a minimum of rejections and an earliest completion of the quantity required.

We have talked about the acceptability of the end product. This obviously involves quality control and inspection. It is essential that the method of inspection and the establishment of criteria for final inspection be established at the time of placing the order, so that the industrial engineers in evolving the process of manufacture will have clearly before them the final objective. To this end it is essential that the customer's inspectors work with the manufacturer's industrial engineers and that the gages which will be used by the customer's inspectors be known and available to the industrial engineers. In our company we always furnish our own inspectors with a duplicate set of

gages to those used by the customer's inspectors. Incidentally, such gages are often long delivery items.

All of the above may seem quite elementary and it is, but I personally believe that nearly every problem can be brought into better focus by reducing it to elementary items.

In my general remarks, I have passed over rather lightly the study by the manufacturer's production or industrial engineers of the item to be produced. Almost without exception, there is more than one way to accomplish the end result of manufacturing the item. One process or series of processes may require more labor and, therefore, be more costly than another process or series of processes. And always there is the possiblity of using special machine tools and equipment, which must be justified on an economic basis with the labor to be saved and/or the required rate of production.

The rate of production is generally the determining factor in any decision along this line, because, obviously, if the rate of production is low, a very expensive special machine tool cannot be justified. The converse is also true, and we hear a lot about automated plants and/or processes. This is a phase of the economic aspect of production which I wish to dwell upon more at length; and so from this point on, I will confine my remarks to the subject of automation. I believe that a better understanding of the economic aspects of the technological advancements which have resulted in the introduction of this word "automation" is important to a better understanding of the economic aspects of production.

The United States has grown to be the most productive, advanced and highly developed of the world's industrial nations, because our inventors and scientists have worked in a climate which gives encouragement and free rein to the imagination; because our businessmen have had both the inclination and the incentive to support financially the discoveries of our scientists; and because working people in the United States, unlike in other countries, have been endowed, by and large, with the vision to see that technological progress always bestows its major benefits on the working man and the Nation as a whole.

Our progress in the future, the advancement of our general living standards, and our position in the family of nations will be in direct proportion to the extent to which we encourage, accept, and adopt scientific discovery and technological development in our economic life.

American industrial management, under the spur of competition, learned long ago that it is good business to stimulate and encourage a continuous assault on new scientific frontiers and that it is good human relations, as well as good economics, to enhance the productive power of human muscle and brains as much as possible through the use of mechanical devices.

Automation is one of the latest words for this kind of thing. It would be idle to contend that automation will not bring about major changes in the economy. If it did not, there would be no purpose in all the work of the scientists who are developing this technological concept and the production of industrial engineers who are conceiving ways to put it to work in the service of the American people.

What is considered by some to be new in mechanization today is the development of ingenious control mechanisms, such as the electric eye, mechanical brains, and other intricate electronic and radiation devices, which can direct and control the operation of machines. The manufacturer's industrial or production engineer has today at his disposal a variety of machines and devices for controlling which, when put together in proper sequence, can turn out a continuous flow of mass-produced products or materials without human hands touching them during the manufacturing process. Such a plant or process is said to be "automated", and the establishment of such plants or processes is what has been termed automation.

Automation will bring about tremendous changes in our manufacturing practices, just as the development of ingenious mechanical devices to do the farmer's work brought about, and is still bringing about, enormous changes in many aspects of agriculture.

Oil refining and telephone communications are examples of industries in which automation has already been applied extensively for some thirty years. The increased availability of motor fuels and of telephone service--resulting from better and cheaper ways of producing them--has led to an enormous expansion in their use. The Nation's consumption of motor fuels is now about 13 times as great as in 1920. The number of telephones in use is four times as great.

Comprehensive statistics indicate that, on the average, we are able to produce goods and services with about two-fifths as much labor per unit as in 1910. Over-all productivity has almost tripled since that year.

Fortunately, we have a highly flexible labor force due to the fact that people are free to apply their services where, when and in what manner their individual requirements may dictate. People have been able to adjust to these vast basic changes. The fewer obstacles we put in the way of individual freedom of choice, the more of this desirable flexibility we will retain.

Despite the almost continuous decline for decades in the number of man-hours required to turn out specific products, the total number of jobs has grown enormously--along with the growth in population. In fact, in recent months total civilian employment has broken all previous records.

The error in some current thinking lies in the assumption that the ability of people to use goods and services is necessarily limited to some specific level or to the variety at present offered in the market. This has not been so in the past and it never will be so, unless, through unwise economic policies, which destroy incentive and penalize profit seeking, we hamper invention and the development of new products and processes and stunt our future economic growth.

By 1975, it is anticipated the population of America may rise to as much as 220 million people. To provide for this additional 50 million, and to continue to improve our living standards as they have improved in the past, we should aim at producing twice the volume of goods and services by that time that we enjoy today. However, our labor force will have increased only by one-third, even assuming there will be as many people wanting to work in proportion to total population as we have now. Obviously, unless we can bring about a 50 percent increase in the average output of goods or services by the individual worker, we will not reach our goal.

We are somewhere near the limit of both productivity and precision obtainable with manually-operated machines. To provide the increase in output which will be necessary and the closer tolerances which many articles of the future will demand, we must make the breakthrough into automatic operation as soon as possible. The faster we can do so, despite the obstacles, the more rapidly we will reach our objectives.

As automation continues, we can expect to see further evidence of a process which is characteristic of all highly productive economies--a great increase in the demand for services and in the number of people engaged in the service industries. As an economy becomes

more productive, there is always a movement of people from the arduous tasks of wresting the products of nature from the soil, the mines, and the forests toward the processing, distributive and service industries.

In the America of the future, we will have more people in the sciences and professions. There will be more teachers and preachers; more artists, writers and craftsmen to hand-fashion things of beauty. We will have fewer people providing for our elementary needs of food clothing, and shelter, and more people providing for our spiritual and cultural requirements.

It is generally recognized that further industrial development in the direction of automation will call for a generally higher order of skill, training, and knowledge than existing industrial methods. Many of the jobs which will be eliminated are those which require only the ability to follow routine instructions. New jobs which will come into being in designing, building, programming, and maintaining the new equipment will require a broader background of understanding.

New equipment cannot be designed or built until there are sufficient trained people to design and build it. It will not be installed until there is sufficient trained manpower to operate it and service it. No business concern is going to make an expensive change in its equipment or methods without first making sure that the necessary manpower is available. Automation can occur only as rapidly as the necessary upgrading of skills occurs. Therefore, the real danger in failing to have enough trained manpower is not unemployment, but a slowing down of technological progress. The availability of scientific and technical personnel is a matter of grave concern to all of us.

New equipment costs money. It can be installed only if someone invests the funds necessary to buy it. Automation's new potentialities for human betterment may be forfeited if industry cannot obtain the capital needed to put them into effect.

Labor, industry and the Government all should shape their policies and their public pronouncements toward welcoming automation and fostering its growth. Factors which hinder its widespread introduction should be examined carefully. Concern for the long-range over-all good of the Nation and its people should take precedence over selfish jockeying for special advantage or throwing roadblocks in the path of automation.

Thank you very much.

MR. MILLER: Thank you, Mr. Munce.

Our next speaker, Gentlemen, is Mr. Carl T. Hoffman, a partner in McKinsey & Company, management consultants. Mr. Hoffman has been a member of NAM's Distribution Committee for a number of years and he is going to outline to you this morning some of the fundamentals of distribution and marketing and their relation to production. Mr. Hoffman.

MR. HOFFMAN: General Hollis, Gentlemen: I am going to attempt to deal with the subject, "The Place of Marketing and Distribution in the Structure of our American Economy." Now on the way over here, General Calhoun told me that this was only a ten-month course, and I assure you we could spend the whole ten months talking about this subject and still have difficulty in covering it adequately. So, if I take a deep breath, you will know why, because I have been allotted about 15 minutes.

Mr. Munce has told you some of the things that have led up to the developments in our great production now, and some of the things we have to look forward to. Being a marketer myself, I feel a little bit again in that unhappy position we sometimes get into where production-minded people want to take all the credit for this. I maintain that, if it had not been for the structure of our marketing system, some of these outstanding developments in the field of production would not have been possible.

In the final analysis, the thing that really supports our American economy and one skill that distinguishes America from all the other countries in the world is not that we are better producers, is not that we have better and more involved skills; it is the skill in marketing. We have learned how to sell and how to dispose of sufficient goods to provide the opportunity for our production people to create these great developments.

What are we talking about when we talk about marketing and distribution? We are merely talking about a series of activities which are performed by people and which utilize facilities. These activities are concerned with all of the things that it is necessary to do in order to cause goods which are produced at a factory, on a farm, or any other point of production to travel through the channels of distribution,

through the hands of the many people who are involved in the process, until ultimately they find their way, and ownership is transferred, to the person at the end of the line who becomes the ultimate consumer or user.

I think it is important that we understand that in our scheme of things for most of the consumer products that we buy, something close to one-half of the consumer dollar is paid for these marketing and distribution activities. The manufacturer, when the goods leave his factory-shipping platform, gets somewhere in the vicinity of 50 percent of the consumer dollar. The rest of it goes to perform these various activities.

Mr. Miller gave us some percentage figures on the employment in manufacturing, in service activities, in marketing, and so forth. It is pretty hard to draw a clear line of definition between service activities and people who are engaged in marketing and distribution, but I don't think we would be very far from the truth if we said that pretty close to as many people are engaged in these various marketing and distribution activities as we would find in straight production.

Thus, in the scheme of our American economy, this whole area of marketing and distribution is a pretty important one, and from the standpoint of you gentlemen who have in your hands the power to disrupt this thing during times of emergency, wartimes, and so forth, I think it is quite important to realize that you are dealing with a tremendous number of people who are dependent for their livelihood on the activities that they perform, and when the system is disrupted, it can have a rather serious impact on our economy.

Now, I would like, if I could, to describe for you in overly simplified terms how some of this process works, and I trust that you will excuse the oversimplification, but I wanted to be able to get through it quickly and to try to make it clear.

Let us take a simple product like chewing gum. Chewing gum probably is not very vital to our national defense, or it might be; I don't know. I understand the boys chew it once in a while. I went through a chewing gum plant last week. I was quite interested in what I saw. It is a rather small plant in terms of size. There were five floors, and each one of the floors was probably no bigger than this room. The process started at the top floor with some machines that beat up the various gums and the ingredients that went into the

product. The material then flowed through other parts of the machinery that extracted the gum, mixed sugar with it, coated it, and finally packaged it for sale. All told--I didn't take an accurate count--but I would judge there were probably not more than 100-odd people in that whole manufacturing operation.

What keeps that plant running at capacity--and is it running at capacity? Well, you can say, "Consumers." Sure, the people who chew gum all over the country. But more important, the thing that keeps that factory running at capacity is the marketing and distribution setup that has evolved over the years and that makes it possible for people to chew gum, the activities that make them want to chew gum, and the activities that make it possible for them to actually turn around and reach for a package of gum at any corner store where they want to buy it.

Let us relate that to marketing and distribution activities. First, the desire to chew gum is stimulated by advertising. You see all these commercials on television, "Chewing gum is good for your breath." It has social prestige, and all the other things. You will see it on car cards, you will see it on posters, you will see it in newspaper advertising, and so forth. Advertising is a marketing activity. It has a specific purpose--to make you want to chew gum.

The next factor is the availability of this gum. You can go into any hotel, any restaurant, any corner candy store, any drug store, any food store, name your own type of outlet, and you don't have to look very far before you find an array of chewing gum. If you want some, you reach out, pay your nickel, and you have got it. That availability is the result of marketing activities. It is something that we tend to take for granted. It cannot be taken for granted. It doesn't just happen. That gum is there because a number of people are performing a number of important marketing and distribution activities.

Now let us consider the chain of events. First we have the retailer who is selling the gum. He is performing marketing activities. He buys the gum first and puts it in his stock. He provides space on his counter to display it. He has to rent the store. It costs him money to make that gum available to you. He has to pay for light, heat, and so on. All these things are marketing activities that have to be performed by the retailer.

Why does he go to that trouble? This again is part of our American economy. We are talking about the little independent businessman

who depends on these things for his livelihood. He does it because he gets paid for it, not by the manufacturer going out and paying him to do it. He goes out and buys it and sells it to you at a little more than he paid. The difference between the two is his gross. He pays his labor out of that. He makes a few pennies profit after he takes his expenses out.

How does it come from this little factory and get to the hundreds of thousands of retailers scattered all over the country? This is where we come to the wholesaler. These things are not new to you, but I think it might be helpful if we try to put them in perspective.

The wholesaler is a much maligned entity in our American economy. I am sure all of you have heard him referred to as the middleman, the profiteer. We constantly hear people say we ought to get rid of this guy; we ought to get rid of the middle-man. He is not needed in the chain of events and takes an enormous share of the profits.

Don't be misled by the views of the uninformed. The wholesaler is there because there is an economic need for him to be there. He is performing a real and useful service. Here are the kinds of things he does:

The wholesaler first buys from the factory in bulk quantities. He has to invest his money in what he buys. Generally he puts that in his own warehouse where he stores in bulk. His function then is to break that bulk quantity up into smaller quantities for delivery to these small retail outlets that he serves. In order to make that possible, he has to maintain a crew of salesmen who go around and call on retail outlets to take orders from any small cigar store or candy store which might order gum in relatively small quantities. The wholesaler must see that those orders are filled and the gum delivered.

Traditionally, wholesalers try to help the retailer to do a better job of merchandising. They may help by showing how to display the gum so it will sell better. Traditionally, they extend credit to the retailer. Sometimes they advertise the product in order to stimulate the sale. They do all these marketing and distribution activities that have to be performed. These are things that cost money, and things that the wholesaler pays. He buys from the factory at one price, sells to the retailer at a slightly higher price, and makes a living out of that.

Why does the wholesaler buy gum from this little factory instead of Wrigley's or some other competitive plant? Here is another group

of marketing activities. Our manufacturers have a sales force of several hundred salesmen scattered around the country, carefully supervised, calling on wholesalers, calling on chain stores, and other channels in order to induce them to carry this particular brand of gum rather than some competing brand of gum. They have got to see to it that within each geographic market area there are adequate representations to wholesalers for the company's products.

To insure that the wholesalers are doing an effective job, these salesmen will hold training meetings with the wholesale salesmen to teach them how to do a better job on this particular gum. These are all marketing activities, all things that cost money.

Now that brings us back to the headquarters level, back in the same factory again where the main offices are and where other marketing activities have to be done. These are to a high degree of a planning nature. Somebody has to decide, if they are going to be in the gum business, what flavors they are going to make; what the standard should be; how to ship and package it; in what amounts to package to have an adequate supply to meet the demand but not have it pile up; how much money to spend; what advertising to do; how much money to spend on manpower in the field; how the gum is going to be shipped; what is the most economical transportation method for dispensing the gum throughout the country--railroad, trucks, airplane, or pony express. All these are part of the marketing process.

This, as I said earlier, is an oversimplification of a very complex structure. These elements, these links in the chain are found in every consumer product that we deal with, but there are a multitude of variations. You will find parallels for them in industrial goods that are sold, not to consumers, but to factories and commercial institutions. There are almost as many variations there as there are people with human ingenuity, but the underlying principles, the basic type of activities that have to be performed remain the same.

You will find companies like General Electric which own their own wholesale distribution outlet, such as the General Electric Supply Company, and which perform their own wholesale function. You will find chain stores like A & P and Woolworth which combine the wholesale function and the retail function, but whatever the setup, retail marketing activities must be performed physically. Goods must be moved in bulk, stored, divided up, dispensed, until ultimately they get out into the retail outlets and into consumer hands.

There are also retail selling, promotional, and other activities that cause goods to flow through channels of distribution. These are all things that are involved in marketing and distribution. Sure, today they are not being performed very efficiently, not as efficiently as we would like to see them. The tremendous scientific advances made in manufacturing processes have not been paralleled in the developments in the field of marketing and distribution, but things are starting to move. There are trends in that direction now.

Some of the evidences that you will see are: The evolution of the discount house; more and more big chain stores like the big food chains, the super-markets, and such things. These are all symptomatic of changes yet to come under our free competitive economy. There is no question in the minds of those of us who are concerned with marketing that we will see outstanding developments in the process of distribution and we have that to look forward to.

Gentlemen, thank you very much.

MR. MILLER: Thank you, Mr. Hoffman.

It is my pleasure now, gentlemen, to present as our next participant in this program Mr. Ernst W. Farley, Jr., president and general manager of the Richmond Engineering Company, Richmond, Virginia, manufacturers of construction equipment. Mr. Farley is also vice chairman of NAM's Industrial Problems Committee. His emphasis will be on the problems of Government controls, such as price and wage controls. Mr. Farley.

MR. FARLEY: General Hollis, Gentlemen: You had a rather bright picture painted about what we are doing in production and distribution. I am inclined to be a production man myself. I feel if you build a better mousetrap, people are going to use them.

In this country an element has been brought into the picture that takes some of the brightness off of that painted by my two predecessors, and that is the matter of Government controls.

During periods of emergency in the past 15 years direct controls of wages and prices have been demanded by the Administration and it has received from Congress such controls. Such controls are viewed by many as part of economic mobilization.

What are the effects of such controls on production? Actually a time of real emergency is exactly the time when we must call upon our vast and complex economic machine for its greatest burst of productive effort. To freeze prices and wages at such a time is to paralyze incentives for quick and effective economic action.

The aggression in Korea in June 1950 came on short notice, but by July 19 President Truman asked Congress for new legislation embodying a number of defense measures. He did not request authority to impose price controls, nor wage controls.

The Congress expressed itself in this connection by setting up legislation as Title IV of the Defense Production Act of 1950 which provided President Truman with standby authority to control prices and wages, and to ration at the consumer level.

The Defense Production Act became law on 8 September 1950, about ten weeks after the Korean outbreak. That was in sharp contrast with the lapse of about ten months which had occurred after Pearl Harbor before the Stabilization Act of 1942 was passed.

Some had thought that the prompt passage of standby price control legislation would have a calming effect on the public, but of course it had just the reverse effect. The legislation carried the threat of controls and possible rationing. That fear was a major factor in stimulating both business and the public to rush for goods and drive prices up.

Up went prices of industrial raw materials--chemicals, lumber, hides, textiles, metals, etc. In a matter of months, the general wholesale price index was about 12 percent above the mid-1950 level. Many consumers rushed into the stores in successive waves of buying and stocked up on goods. Retail prices of cost-of-living items moved up an average of about 5 percent in five months.

This was good news for the advocates of controls, who lost no time in capitalizing on these developments by setting up a clamor for governmental action. By January 1951, they were successful and the Office of Price Stabilization issued the famous general freeze order.

The General Ceiling Price Regulation was dated 26 January 1951, and this order declared prices frozen at the highest point obtained between 19 December 1950, and 25 January 1951.

There followed gradually such a mass of detailed price regulations that one industry after another was confronted with tons of paper work, elaborate rules and formulas, and drastic upsets in its plans and operations. For manufacturers alone, the following ceiling price regulations were among the most important ones:

CPR 22--Manufacturers, general
CPR 30--Machinery
CPR 37--Cotton Textiles
CPR 41--Shoes
CPR 45--Apparel
CPR 18--Wool fabric yarns

It took a long time to get an industry regulation; it took a longer time to figure it out. Then many supplementary orders began to pour out of OPS, and some countermanding regulations, and some overriding regulations. CPR 22 ran into 35,000 words and its supplemental Regulation 17 was about 25,000 words in fine print. The administrative difficulties of handling these regulations were fearful for OPS, but they were immeasurably worse for businessmen.

The general public may have been lulled by the advent of price controls early in 1951. They may not have been much concerned with the harassment of industry since no ordinary person could understand the regulations anyway. Moreover, no rationing of consumer goods was introduced, and hence the public did not feel shackled on that score. What the public did not know very much about was the fact that the bureaucrats were back in the saddle again and were seeking tremendous and shocking additional powers going far beyond price and wage controls.

In the spring of 1951, the bureaucrats in Washington lined up an astounding series of proposed amendments to the Defense Production Act. Here is a list of some of the proposed additional powers that they demanded from the Congress: Unlimited authority for the Executive Branch of the Government.

1. To condemn and permanently take over any property it may desire.

2. To operate plants and to sell and buy in any way that it may please.

3. To set up any and as many corporations as it may desire.

4. To finance and operate any and as many corporations as it may desire in the name of defense.

5. To buy any commodities, either foreign or domestic, and dump them on our domestic market at any price it may desire.

6. To subsidize any individual producer or industry to whatever degree it may decide.

7. To demand and publish any information it may desire from any individual or corporation regardless of the effects of such publication upon such individual or company.

8. Unlimited authority for the Executive Branch of the Government to censor or suppress any governmental statistics of business or Government operations.

Taken together, these proposed amendments to the law would have been a long step toward complete Government control, through powers comparable to those exercised by foreign dictators. Such socialization of our economic system and nationalization of industry could not be tolerated by the American people. It was clear that such unnecessary curtailment of freedom of action could be the fore-runner of the loss of all other freedoms--the very thing that the defense program was designed to protect. Only the alert and energetic protests of leading business organizations and other important groups, and the watchfulness of leading Congressmen, prevented this outrageous reaching for power from materializing.

The Defense Production Act of 1950 was scheduled to expire on 30 June 1951, and in the process of planning to extend it the Banking and Currency Committees of the Congress and certain other committees held public hearings on it and on many proposed amendments. This was the first public hearing on it. There had been no public hearings when the act was first set up. The proponents of the extension of controls were the operators of the controls themselves.

The matter which many deemed to be of first importance was to kill the proposed amendments reaching for drastic additional powers, and this was done, as previously described.

There was a great deal of argument about price and wage controls, and the bureaucrats in power were the principal advocates of continuing them. They said that they did not like controls, but they fought for them--and to extend them--with all the ammunition they could find. They seemed to think that the answer to the inherent weaknesses and failures of controls was to give them more power, more controls, more penalties and enforcement powers, and bigger staffs.

Those who opposed price and wage controls pointed out that price controls are fraudulent and harmful because they lull the public into a false sense of security and conceal from the people the fact that they are not curing the root causes of inflation. They deal only with the symptoms--the suppression of prices--rather than with the fundamental causes of inflation. The fundamental causes are in unsound fiscal policies of the Government, or to put it in simple words, too much money chasing too few goods.

The public naturally wants the value of its money protected. Consequently the idea of price controls sounds good. But when they favor price controls, what they are actually striving for is economic stability. They simply want to prevent high prices and to keep the value of their earnings and savings on a sound basis.

In an effort to get at basic causes of inflation, it has been proposed that such a program as this would be far better:

1. Keep the Government constantly on a pay-as-you-go tax basis, including the military program.

2. Press hard for Government economy, holding both its military and its civilian expenditures to the minimum necessary to do the job.

3. Make effective use of the powers of the Federal Reserve System to prevent the private credit system from contributing to inflation.

4. Work for better balance between income taxes and excise taxes.

5. Protect the incentives for increased productive efficiency and expansion by relying on the free market for the 80 percent to 85 percent of our economy not directly related to the defense effort.

Many other constructive suggestions were made to congressional committees, but the "controlists" wanted to go right ahead with their shadowboxing techniques.

In the spring of 1952, it was possible to look back at the record of prices in 1951 and plainly see the futility of price controls. For example, out of 41 groups of commodity prices at the wholesale level, 19 groups of prices had gone up during 1951 and 19 other groups of prices had gone down, while three groups remained unchanged. For those that went up, price controls had been ineffective. For those that went down, price controls were unnecessary. For the groups of prices that went down by 20 percent to 40 percent or more, price controls were positively ridiculous.

Industrial capacity had continued to grow in all major industries. Business inventories were high. Consumer supplies were generally ample and consumers were well stocked with goods, including refrigerators, vacuum cleaners, washing machines, and automobiles.

There was no economic emergency in this picture, but some said that there might be a future emergency requiring price controls. Once again the Defense Production Act was extended, and with it Title IV, carrying price and wage controls. Meanwhile, the basic inflationary heat was kept going with a predicted Federal deficit of 14 billion dollars for the ensuing fiscal year.

During the Korean conflict in January 1953, the President asked for an early end to price and wage controls. He did not ask for legislation to extend these controls in any way.

Nevertheless, in February of 1953, a bill was introduced in the Senate to provide standby economic controls. This included a proposal to keep the Office of Price Administration and the Wage Stabilization Board alive, on a standby basis, with certain changes and limitations. Then a second bill was introduced in the Senate in the same month by the same author embodying the idea of authorizing a 90-day freeze of prices and wages by the President in case of emergency. Thus, even as price and wage controls were fading out of the picture, a certain tenacity made itself felt--a persistent notion that such controls might be both politically and economically desirable.

Opponents of the standby plan emphasized, among other things, such points as the following:

1. Legislative weapons which are inherently unsound in principle and demonstrably unworkable in practice should not be held in reserve.

2. Such extensive legislation as that proposed should not rest upon a basis of pure speculation as to possible future need for it, and as to what the nature of that need, if any, might be.

3. It would keep alive the philosophy of a planned economy through direct Government interference.

4. And it indicated a continuation and extension of the unfortunate tendency of the past five years to surrender congressional power to the Executive.

5. The dangerous uncertainties involved in this legislative "sword of Damocles" should not be held over the heads of the public, the consumers, and business in general.

6. A standby organization would be sure to continually propagandize at taxpayers' expense for the restoration of arbitrary controls, as a justification for its existence and as a bid for power.

7. The way would be paved for discrimination against certain groups by establishing the threat of selective recontrol, as provided in the bill. For example, a producer might be subjected to a price freeze while a competitor remained unrestricted. Or a union might get a crackdown on wages while another union remained free.

Although the standby controls bill and the 90-day freeze bill did not become law, the Office of Defense Mobilization went ahead with a planning unit, including former OPS people, mapping out in great detail various plans for possible future controls.

In October 1953, Director Flemming said in his published ODM report to the President, in the section on Wage and Price Controls:

> "In accordance with the promises that we made to Congress and the public, we are developing detailed plans for stabilization controls which can be submitted to Congress whenever it is decided that conditions warrant such a move. The objective of this work is to prepare a series of stabilization policies and actions based on alternative assumptions of the kind of emergencies that may face us in the future."

In conclusion, it is suggested that the indirect controls, as mentioned earlier, can serve adequately to enable business and industry to more effectively adjust to mobilization production to accomplish maximum output with the minimum of manpower, material and time, and, at the same time, restrain the threat of general inflation through maintenance of competitive practice in industry.

QUESTION: Mr. Miller, I wonder if you would be in a position to tell whether the joining of the AFL and CIO will create better labor relations or poorer ones?

MR. MILLER: That isn't the 64 dollar question but the 64,000 dollar question. I am frank to say at this point, I don't think anybody knows. There is inherent in the merger an opportunity to improve labor relations but a lot will depend on the attitudes and policies of the leaders of the individual unions. We think, of course, that the place where you improve labor relations and the place where collective bargaining should take place is at the company level. On the other hand, I think we have to bear in mind that in a merger such as has taken place there is a welding of a considerable degree of power and it is going to depend in a large measure on the way that power is used.

There are already, as you know, abuses in the labor field as a result of the monopoly that exists, and you are familiar with it in the resistance to the right to work, the element of compulsory unionism, in coercion, violence on the picket line, and other aspects of it. So I think it is too early, quite frankly, to evaluate what the possibilities might be in the direction which you asked about.

MR. FARLEY: I would like to comment a little further on that. In Richmond we have had an experience which leads me to believe we will have more trouble by the elimination of competition between the AFL and the CIO in the labor field.

We have been subjected to a jurisdictional dispute. Our workers are covered by contract with Local 526 of the Boilermakers. It covered our plant and erection workers. However, on a job just outside of Richmond where men were commuting to the job, 103 out of Baltimore moved into the job and picketed it. We closed down the operation which employed 140 people, so that in order to open again, we would have been forced--if they had stuck to their guns--to breach our contract and sign with them. Well, they had to withdraw. We set the wheels in motion to go to the NLRB. The international boys had said that the

pickets would stay on until we would give in, but the business agent of our union convinced them that they hadn't a leg to stand on, and after ten days they went back to work.

MR. MUNCE: My company, as it so happens, has, may I say, enjoyed an independent union, neither affiliated with the AFL or the CIO, although both of them have tried to get into the plant, or to organize our workers into a branch of their international. Now just the other day they came out in the paper with a new warning to us that they were going to make another attempt. We don't know whether that is significant of the attitude on the part of the combined organizations or not. I agree with Mr. Miller that it is too early to tell. There is a tremendous amount of power, as he said.

It might be interesting for this group to get a copy of the constitution of this combination and see the inherent power contained in that constitution, in the top officer of the combined organization. So long as that top officer and his immediate juniors are sensible, reasonable people, I think it might be for the better, but if we got an abusive type in there--when I say abusive, I mean one who is prone to take advantage of it--it could be terrific. I don't think we know yet.

QUESTION: I address this question to the panel as a whole although Mr. Farley may want to give his views, dealing with Government control of the economy in peacetime. Since 1951 and the accord between the Treasury and the Federal Reserve, the control on credit has been fairly successful in stabilizing the economy. Could you give us your views as to the effectiveness of Government control in stabilizing or leveling out a peacetime economy?

MR. FARLEY: I think I intended to convey the idea in the remarks that I made that the indirect controls, such as the Federal Reserve and tax controls, are possibly the proper way to handle credits and other forms of inflation. It works into and fits in with the business system and the competitive system that we know and know how to operate under.

The point that I attempted to make had specific reference to the direct controls that tended to disrupt channels of communication, distribution, and the free markets. I think effective controls in peacetime of the Federal Reserve System have been shown to be excellent.

MR. MILLER: Gentlemen, with your permission, I am going to call on another member of our staff to supplement that, Russ Taylor, director of our research. Russ, will you add to that?

MR. TAYLOR: Well, in a nutshell, the important thing that we feel must be preserved is that inherent flexibility in the competitive system that we normally operate under. I think Mr. Farley emphasized particularly in his exposition of some of the artificial controls that have been undertaken during periods of emergency or partial emergency that you are attempting to do a virtually impossible task--I might suggest primarily for political reasons perhaps--and things like OPA or OPS are attempting to control prices on perhaps eight million or more different products. You can't do much about controlling prices if you can't control wages because they are such an important factor in costs. You can't do much about either of those unless you get into the field of materials allocations and priorities, things of that kind.

The Defense Production Act was perhaps the chief instrumentality for trying to impose these rather arbitrary and artificial controls during the emergency period, and it was a marvelously revealing experience, I believe. But I doubt that it ever could be anywhere near as successful as just permitting that ultra-sensitive system of competitive pressures and adjustments to operate and demonstrate its responsiveness to the needs of the situation.

I believe, to put it briefly, that the very time when you most need that flexibility, that immediate response, is in a national emergency, and that is the very time when the effort is made to impose these artificial controls.

MR. MILLER: I just want to add one word to what has been said because certainly in our judgment the way the Federal Reserve Board has been functioning during the period of the current Administration certainly has been excellent.

QUESTION: Recently there has been quite a lot of criticism and congressional investigation of big business--General Motors, and so on. Would you gentlemen give us your comments on the effectiveness of industrial mobilization as between the mobilization of big business versus small business?

MR. MILLER: That's a good question. Who on the panel would like to take that one first?

MR. MUNCE: Our Committee in NAM made a study a very few years ago, not this past year, which indicated very definitely that

there was no difference between big business and small business. We reached into several sectors and made several approaches. We have reviewed one of them, did it all again this past year, and that was in regard to Government aid in financing small business.

I am giving you something that hasn't been released, but I can tell you the results of that study, backed up by contact with many thousands of manufacturers of all types, was that the small manufacturer thinks he is getting along all right and he doesn't need the financial aid that has been hawked around Washington more recently.

MR. FARLEY: I can add very little to what Mr. Munce has said, but I do want to point out that in time of emergency a small business is apt to be much more flexible and can move faster in a different direction than can big business. I think Defense Department experience already recognizes that, that a small plant can stop its production line and reconvert to war production much quicker than large business. On continued production, a big company, while it will take longer to get into production, can produce faster once it gets going.

MR. HOFFMAN: I think that there are inevitably forces at work, however, moving us in the direction of greater and greater concentration of our production capacity in the larger units. As Mr. Munce was telling about automation and specialized machinery, all of which is aimed at reducing labor content, if you will, and lower production costs, we run into certain inevitable economics that mean a certain size is necessary in order to be able to afford capital investment in the way of specialized machinery, control devices, and so forth, that are required. There are a number of industries today that are reflecting the economics that are wrapped up in this thing. In the food industry, for example, it is becoming harder and harder for the small food producer to survive. That is why you see so many mergers going on, large companies like Minute Maid and Snow Crop, the big General Foods combines, in order to be able to produce these various items at costs that are competitive. You just have to have a certain minimum size in order to be able to achieve the cost results necessary.

I think certainly in specialized industries like the automotive industry, one of the big questions before us today is: Can small industries like Studebaker-Packard survive against the tremendous advantage of General Motors and Ford from the standpoint of production economy? So, whether we like it or not, I think inevitably we are going to see more and more concentration of industry in greater association of companies.

MR. MILLER: One point I would like to emphasize in that connection is the interdependence of big business and small business in this country. I heard Harlow Curtice of General Motors state at a luncheon in New York the other day that they had 21,000 suppliers. So you can see there is a very broad effect, a very strong relationship between a company of the size of General Motors and 21,000 other companies that might be, in many respects, very small units of production.

MR. MUNCE: I can't pass up the opportunity to call attention to the fact that the marketing men finally referred to cost of manufacture, so probably manufacturing has something to do with it after all.

QUESTION: Mr. Farley, going back to direct controls again, what guarantee has any administration got that industry will police itself in an emergency? For instance, what guarantee has the Government got that General Motors will stop making automobiles and shift to making tanks, combat trucks, and so forth, or will not overcharge us for them if we don't have some kind of direct controls?

MR. FARLEY: I think that that is a very good question, and I don't for a minute want you to believe that we think, or that I think, we can do without some controls or limitations. I was attempting to point out the effect of controls on production and being able to rapidly develop in a different direction. I think you have got to go back of that a little bit and examine what kind of emergency you are talking about. Are you talking about war?

QUESTION: War, yes.

MR. FARLEY: War for what purpose? To defend free people in a free economy? If so, if they understand that, I don't think you will have any trouble with cooperation to produce the things that are needed.

Early in 1942, I left business and went into the military. There were very few people that I ran into in the procurement function that I was associated with who showed any inclination to continue in the same old direction. Immediately that war was declared, our company threw everything away and went directly into war production. (We had mobilization plans but they were quickly thrown away and we started on others.) I don't think big business is any less patriotic than small business if there is a need.

QUESTION: I am wondering if the panel would direct themselves to the question of whether this philosophy of increased purchasing power as a basis for prosperity, or the philosophy of spending for investment, thus creating more jobs, is a better basis for prosperity?

MR. MILLER: That is a very good question. Will you take that one, Mr. Munce?

MR. MUNCE: I think you had better ask whoever is scheduling your lectures to give us a whole other day to discuss it at length. That seems to be one of the questions like "Which came first, the chicken or the egg?" I think it is too difficult a question, at least I am not master enough of words, to convince you in a few short statements. I will give you this:

I think unquestionably the opinion of members of NAM is that the capital investment must come before the individual spending and not behind the individual spending, as the leaders of organized labor have contended for some time. I might add that that very question was argued on a panel at the NAM Congress. Unfortunately, the discussion was cut off early and we didn't get as much fire as we should.

The opinion of NAM and of industry is that you may have all the individual spending you want, but without investment spending, you will only bring about inflation and higher prices. We have to have investment spending in order to create the job, because before you can have the money in the pockets of the men, you have got to have increased investment in the individual's job which has grown tremendously over the years. There was a time when you gave a man a pick and shovel and that was all the investment we had in tools for him. Now we have a steam shovel for that same workman.

MR. FARLEY: I think if you look back and think of the fundamentals of our economy, which is supply and demand, that you tend to upset that applecart, that effort to pump up our free competitive system by trying to generate a market to buy something. To generate purchasing power before you have generated a product and created a demand gets the cart before the horse.

MR. HOFFMAN: This gets back a little bit to the point of view I took earlier. When you get mixed up with these damn production guys, they want to take all the credit. I don't think there is a black or white answer to that question. I think it is the interplay of forces on both sides.

I am not an economist but I have had a number of discussions with economists that have had a bearing on this subject and have followed their prognostications and predictions for years. Going back a number of years prior to the year 1954, they were predicting some kind of recession. They didn't know how severe it was going to be, but they were sure there was going to be one. Looking ahead to the period of the early sixties, they foresee economic forces at work that are going to furnish a good deal of stimulation for our economy.

All of those things revolve around really the market for products, the availability of people, and their needs which will have to be satisfied. They go into such complexities as the changing age levels and the marriages in our total population. They point out that during the period, 1954 and through there, we were experiencing a relatively low level of people of the age where they normally get married, reflecting the low birthrate during the depression years.

Because of the anticipated low level of marriages--low level of family formation, they call it--they anticipated a decline in the demand for such items as one normally purchases to put together a home when they get married--furniture and such. In the sixties, there will be a higher birthrate, plenty of children born, then reaching marriage age, high family formation with all the demand for material that goes with it.

Sure, there has to be purchasing power there. And purchasing power comes about by people, by applying a high degree of cushioning in this thing of credit buying. People create families who buy when they haven't purchasing power; if the need is there, they are going to buy. I don't think you can attribute credit to either side.

It is not a question of investing money in capital equipment. First, you create purchasing power; you create a demand, a market for it, which is the availability of people with needs to be satisfied. It is a combination of both, which is one of the things that makes our economy a complex thing to try to deal with. That's why we get these controls.

MR. MILLER: I do want to emphasize two points: One is we are going to have over the period of the next 20 years a substantial increase in population in this country. The original estimates of a few years ago were that it might be as high as 221 million. I understand now that some of the most recent estimates are that it will be as high as 227 or 228 million. During that same period, what is going to be happening to the labor force? It is estimated that it will rise from 64, 65 or 66 millions

now to about 88 millions, increasing by about a third during the same 20-year period. That means we have to find capital to provide jobs for approximately a third more people in our labor force in the next 20 years than we have now.

It is estimated that it takes 12,000 dollars to provide a job for one production worker in this country. That means somehow, someway, over and above the cost of plant and equipment for purely replacement purposes, we have to find somewhere in the neighborhood of 240 or 260 billion dollars of new capital during the next 20-year period.

We believe, from the standpoint of the economy, that capital investment is the sounder approach to our job problem because obviously in providing capital investment for construction and plant purposes, you not only provide jobs in that regard but you provide plant and equipment which is going to be turning out goods and services. This means more people will be employed, which increases not only the amount of money being paid in making jobs available but creates purchases of goods and services for which that money can pay, so you don't have the inflation aspect which you otherwise would have when you pour goods into the market.

MR. MUNCE: Your figures are based on no improvement in the standard of living, which none of us will accept, and which adds to those figures or accelerates them.

MR. MILLER: That's right. That is an unintended and significant omission because the facts are, or at least opinions are, that if we do the job I have outlined within the next 20 years, the standard of living will increase by somewhere in the neighborhood of 70 percent. That's a significant increase in a 20-year period.

MR. FARLEY: I think it is only fair to add that capital fundamentally is the investment of savings regardless of whose savings they are, and you can't spend 100 percent of your pay check and have any savings left. I think it touches on the point of view of socialism, the idea that you can spend your way into prosperity. Unless a certain portion of our Nation's money is put aside for savings with which to expand the economy, we are in the soup.

COLONEL WALKER: Unfortunately, our time is up. I would like to thank you, Mr. Miller, Mr. Munce, Mr. Farley, Mr. Hoffman,

and your associates from the NAM, on behalf of the Industrial College, for a very worthwhile and splendid presentation this morning.

MR. MILLER: Thank you. We were glad to be here.

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