



## THE WAGE-PRICE RELATIONSHIP

Dr. Jules Backman

### NOTICE

This lecture has not been edited by the speaker. It has been reproduced directly from the reporter's notes for the students and faculty for reference and study purposes.

You have been granted access to this unedited transcript under the same restrictions imposed on lecture attendance; namely, no notes or extracts will be made and you will not discuss it other than in the conduct of official business.

No direct quotations are to be made either in written reports or in oral presentations based on this unedited copy.

Reviewed by: Colonel J. H. M. Smith 23 November 1962

INDUSTRIAL COLLEGE OF THE ARMED FORCES

WASHINGTON, D. C.

1962 - 1963

The Wage-Price Relationship

4 September 1962

Property of the Library  
INDUSTRIAL COLLEGE OF THE  
ARMED FORCES

CONTENTS

	<u>Page</u>
INTRODUCTION -- Colonel Bradish J. Smith, USA, Member of the Faculty, ICAF . . . . .	1
SPEAKER -- Dr. Jules Backman, Research Professor of Economics, New York University School of Commerce, Accounts and Finance . . . . .	1
GENERAL DISCUSSION . . . . .	22

NOTICE

This lecture has not been edited by the speaker. It has been reproduced directly from the reporter's notes for the students and faculty for reference and study purposes.

You have been granted access to this unedited transcript under the same restrictions imposed on lecture attendance; namely, no notes or reports will be made and you will not discuss it other than in the context of official business.

Reporter: Albert C. Heider. <sup>No direct quotations are to be made either in written reports or in oral presentations based on this unedited copy.</sup>

Reviewed by: Col. J. R. M. Smith Date: 13 November 1962

Publication No. L63-15

INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington 25, D. C.

## THE WAGE-PRICE RELATIONSHIP

4 September 1962

COLONEL SMITH: I think we are especially lucky this morning in that our speaker on "The Wage-Price Relationship" is a man whose broad experience embraces not only the theory of economics, but also its practice. As far as I can tell, our speaker has done about everything, a great deal more than will fit in that brief biography of him that you have all read. So, I think I'll stop by saying that Dr. Backman began his career in economics by working in Wall Street and by going to night school at NYU. Since that time he has kept in close touch with practical economics through his membership on boards and with business advisory groups.

It's my privilege, gentlemen, to present Dr. Backman.

DR. BACKMAN: Thank you Colonel. If you saw the way I hit a couple of nine-irons yesterday you wouldn't say I could do practically everything. I could tell you a couple of things I didn't do very well at all. I won't even mention that nasty word "shank," although I did, didn't I.

My problem this morning is to try to compress within a relatively short period of time some of the high-lights of the wage-price situation. Because, this problem is so complex, so complicated, that one can just about hit the high-lights of the high-lights. It's my hope that those areas I don't have the opportunity to hit in the formal presentation will be covered by your searching questions and your efforts to trap me with them during the question period. In that way maybe we can get all phases, or at least the more important ones.

First, what about wages? I think it's important for us to recognize that wages represent two different things. To the businessman they represent costs. To the worker who receives them they represent purchasing power. This is the reason why, when you read the claims and counter-claims of management and union in various collective bargaining situations they never seem to be talking about the same thing. But actually they are; they're talking about two aspects of the same thing. Sure, to industry the amount of money that workers will earn is important because this helps them to sell their product. But more important are the costs that they incur themselves, and those costs consist not only of what we loosely call wages - meaning the amount of money that you're paid each week, or take-home pay, the amount of money that is left after the government takes out its cut in one form or another - but those costs also include things like Social Security taxes. If a man is paid \$100 a week there is another 3 1/4% that the employer must pay.

There is another approximately 3% he must pay for unemployment insurance. And very often he must pay something for workmen's compensation. So, \$100 to him is not \$100; \$106, \$107, \$110. And it's not only \$110, it's also the money he must pay for pensions, sick leave, welfare funds, supplementary unemployment benefits, and everything else. And so, out of a hundred dollar check maybe the worker takes home \$85, or \$80, or \$90, depending upon his family status, but on the other side of that coin is the cost that can run at \$120 or \$125, because all of these fringes today - and they're not really fringes anymore, they've become so big - all of these non-wage benefits, as I like to call them, have come up to about 20% or 25% of the wage. And so, this hundred dollars is not the cost; it's something like \$120 or \$125.

And the \$100 is not what the worker receives; it's something like \$85. And so, you can understand why it is that management and labor seem not to be talking about the same things when one is talking about \$80 or \$85 and the other is talking about \$120 or \$125. Yet, both represent the cost of labor.

Now, labor as a cost is not a question of that \$120; it's really a question of what you get for the \$120. For example, I don't have the current figures, but a couple of years ago our coal miners were paid five times as much as British coal miners. You say, "Boy! that's a pretty high price to carry." But wait a minute. They were turning out seven times as much coal. And so it turned out that the unit labor cost for these coal miners or the work they did was lower in this country even though the wage was five times as high. That is particularly important when we talk about competition with overseas workers; when we talk about how a 35¢ an hour Japanese worker is undercutting the American market. Or when we talk about a 75¢ or 80¢ an hour English worker undercutting the American market. Because, we can't look at those wages alone or the wages plus non-wage benefits alone, we must also relate it to something called "output per man hour, or productivity." And only then do we come down to what is the real burden, the real cost to industry in terms of its wage or labor-cost bill.

Let's look at purchasing power for a moment. Approximately 70% - 7/10 of our national income takes the form of wages. It's true that that figure includes about three or four percentage points which is management's salaries, and the balance - roughly 2/3 of our total income is what we normally call "workers." 70%. And so, it's clear that wages represent the most important source of purchasing power.

But actually it's even higher than that, because the other 30% includes about 15%, sometimes a little more, for professional salaries or professional income - for proprietors; little mom and pop stores; for farmers. I think you and I know that whether you are your own boss or not, actually part of that represents labor income even though it isn't called labor income. And so, we find labor income accounting in the neighborhood of 85% of all income. And wage and salary income in the neighborhood of 70% of all income. So, when we say that wages are important as a source of purchasing power you see that what we mean is that they are primarily the main source of purchasing power in this country. Therefore, what happens to wages does play an important role in terms of what will happen to the purchases of goods and services.

In fact, if we were to examine the relationship between say retail sales and consumer income after taxes - consumer disposable income - we would find that it is very close. When incomes go up sales go up; when incomes go down sales go down. That's not difficult to understand if you have a wife and a couple of kids, and you earn about \$90 or \$100 a week. It's obvious that anything that comes in is going to go out. You may make all kinds of resolutions, but let's not forget the ladies and the children, gentlemen; they'll take care of those resolutions very quickly. You can always spend a little more - it's no trick - within that framework of income.

And so, it's not surprising to find retail sales closely related to disposable income, which, in turn, is closely related to wages because 70% of the total. So, you see both sides of this coin represent truth. Our problem is to really look at both; labor as cost, labor as purchasing power; and try to achieve some sort of

workable balance between them.

There is one other aspect of purchasing power which is important. Just as total labor costs don't tell us the whole story, so total money income doesn't tell us the whole story. It's what you can buy with that income which is important; the purchasing power of that income. And this is where we have one of our first relationships to prices, as you see.

Here we look at the consumer price index which shows the cost of purchases for moderate income families - usually urban families - for a fixed basket of goods and services. Here it is; a basket of hospital care, meat, oranges, soups, vacations, education, all of this in one basket. And each month we attempt to measure it. As that basket cost goes up a given dollar of purchasing power for the worker or others, goes down. If you earn \$100 a week <sup>and</sup> /prices go up 10% - you don't buy as much. If prices go down 10% you can buy more. So, it is really wages - money wages - which is the critical area; real wages representing a relationship between the income you have and what you can buy with it.

Now, this, as I say, is only a first step. Let me spend a minute or two on how wages and fringes are determined. I'm not going to be concerned here with theory because there's a far call - a far spread - between theory and practice. We have all sorts of fancy words and theories; the marginal productivity theory of labor where a man gets out his calculator and he figures how much is going to be added to his product and how much he can afford to pay. Can you imagine Roger Blough at U. S. Steel getting out the old calculator and making these estimates? He couldn't make it in the first place; he doesn't have the raw material. So, it's a nice theory.

Collective bargainers, of course, never pay any attention to it. Now, this doesn't mean that theory may not set bounds beyond which you cannot go. What I'm really concerned with is, what do they really look at. Here we find six categories of information. Let me just mention them first and then say a word or two about each. Wage comparisons, changes in the cost of living, productivity, budgets, profits, and the economic environment.

Wage comparisons: Except for a few national leaders like the automobile industry or the steel industry who set the pace, all the others follow. When they follow, the most important factor they look at is, what did the other guy get. You take any community, it makes no difference which one you want to choose; take a large one like Pittsburgh; take a smaller one in the steel industry, like Gary.

In Pittsburgh what happens to steel affects aluminum, or what happens to coal affects electrical equipment. When you have those three in Pittsburgh you've begun to effect retailing wages, believe it or not. Because, the local wage level is the important point. And as you move through the middle-west and get your interactions between these industries, automobiles, rubber, farm instruments; you name them, they're all there, slowly but surely the whole pattern begins to develop. Now, I don't mean that everybody gets exactly the same thing. What I do mean is that the general level is significantly influenced by what happens to these what have been called "key wage bargain industries."

There are deviations from it; some get more some get less, depending upon other criteria to which I'll refer. This becomes an extremely important element. If you don't believe it you ought to see a railroad wage case. The union will come

in with a pile of exhibits that's this high. I only say this high because it gets tough to reach any higher. They reach from here to the ceiling. And what do they show? Exhibit No. 1; comparison of railroad wages in absolute amounts, with every component of the Bureau of Labor Statistics Hourly Earnings Index. And he goes through it page after page to show that so many went up and railroads didn't.

Then they take a second series of exhibits where, instead of taking the absolute numbers they take the differences. The same thing, you see, but another way of saying it. Then they take a third series of exhibits where they converted the percentages. And they take a fourth set of exhibits where they array them. Here is the size of the increases. Now they're down here, you see. So that, here is this wage comparison in many manifestations; not in some little local machine shop, but in the railroad industry which has 800,000 employees, and where they're negotiating for all of these employees or large groups of them at one time. So, wage comparisons play a very important role.

The cost of living: As I said a moment ago, if the cost of living goes up you can buy less for your money. This means that there is pressure, real pressure, and therefore the workers and the unions which represent them insist during periods of rising prices to at least try to remain whole, which merely means, to maintain the level of living they had before. If they can increase it beyond that, fine, but you must at least remain whole, and I might add that very rarely will you find in any of these negotiations that management won't give at least the cost of living. And, of course, in arbitration or in any other type of arrangement where an outsider comes in, it is almost unheard of that they don't give at least enough to maintain the

workers' position whole.

This factor, of course, is a very opportunistic factor. During periods like, say, 1945 through 1948; from, say, 1956 through 1959, this factor assumed some importance because the cost of living was rising; also during the Korean War. At other times the unions lose interest in the cost of living. If the cost of living is going down they're not very happy; they take a wage cut to remain whole. They rather, sort of get an extra little piece. Of course, management is very anxious to call attention to this little detail during periods of declining prices.

But you realize since 1930, except for 1948-49 we've had no dip in prices that was even worth talking about. The cost of living dropped some 4% or 5% during that period, but that was the only period it declined, and I might add all the unions abandoned so-called "escalator clauses" which are automatic clauses providing for an automatic increase in wages whenever the cost of living goes up. Escalator clauses have no interest as soon as the price level begins to stabilize. Then you negotiate. But, it is a factor.

A third factor; workers' budgets. This sort of sets a goal. Here's what it costs to live; I want to have at least this much. Actually, it isn't used too much in collective bargaining, although it is brought up in major areas like steel and railroads. But in most of the less important collective bargaining deals you never hear of budgets. You do hear about it when Congress is concerned with minimum wages. There, what is the budget required in order to keep body and soul together. What is the minimum? But very quickly we get away from a subsistence budget and we get up to the good old American standard of living budget which is quite

different.

Productivity: This is an important one; a few extra words on this because I'll be coming back to it very shortly. What is this productivity? A long time ago, economists, in attempting to measure what happens to the economy, and in an attempt to understand growth in the economy, quickly discovered that growth is a composite of several things. If an economy increases in size - and we're only talking in terms of its economic size now - two things seem to be important. One is, more people who were in the population the more people were working. Well, obviously, if everybody continues to turn out the same average amount of goods your total must increase.

Secondly, we found that not only did we expand because we had a larger population and a larger work force, we expanded because each member of that population was turning out more. And so, when you hear of long-term growth in our economy at 3% or 3 1/2% you usually also hear that about 1% or 1 1/2% - it depends on the time period - was attributable to the increase in the number of people working, and now we mean the number of hours they worked, really. And the balance was due to the fact that those people who were working were turning out 2% or 2 1/2% more a year.

Now, I know that a figure like that, of 2% or 2 1/2% seems inconsequential; it doesn't seem like you could grow very rapidly. So, let me initiate you into the mysteries of compound interest. 2% a year doubles itself - 102 times 102 times 102 - in 36 years. I have a built-in IBM machine on which I make these calculations when I talk about them. 3% - 103 times 103 times 103 - doubles itself in 24

years. Well, I won't keep you mystified; the secret is very simple. If you want to find out how long it takes to double at any given rate of interest you divide it into 72 and that will give you the approximate figure. 4% takes 18 years. It won't be off very much; it's a good rule-of-thumb.

And so, this little 2% which doesn't seem like very much means that in somewhat more than a third of a century you double the output per man. And in 2/3 of a century you increase it four-fold. In a century or a little more you increase it eight-fold. Now, someone comes along and says, "Well, 2% isn't much; we ought to increase it to 3%, or 4%." Let me tell you the difference between 2% and 4% because it doesn't seem like much. Remember, 4% will double in 18 years; not in 36 years. So, at the end of 36 years it's up four-fold; at 54 years eight-fold; and 72 years sixteen-fold; and 90 years thirty-two-fold. At the same point where the other has gone up some eight-fold, this has gone up sixty-four times. And so, the difference between 2% and 4% was that in a little more than a century you have eight times as much one way and sixty-four times as much the other. These become big numbers. And if I were starting with a number like a thousand, a hundred thousand, a trillion, or any other figure, you see how big these numbers are.

And so, this little extra 1% or 2% is not quite as simple as many people would like to have us believe. Let the economy grow, we are told, we'll merely add 1%. Merely. Well, this merely is a heroic achievement.

Now, I know - this is just a little aside - that we're all concerned about how rapidly the Russians are growing and everything else, and we're sort of growing slowly, but you know this 2% - this unimportant 2% - has been labeled by economists

as the miracle of productivity. More than 300 productivity teams came here from every part of the world to analyze and to discover the secret of this miracle. To me, the amazing thing about Russian growth, frankly, is how small it has been. All they have to do is steal from others. All they have to do is take the inventions which we already have and copy them. This is much easier, you know, than trying to do the job from scratch. I'll admit, they do have many firsts - baseball; there are a lot of others like that which they've developed. But let's face it, gentlemen, when they get to the point of where they have to proceed under their own steam - and I'm not belittling their accomplishments in one field - rocketry, for example - the fact is that in most of these other areas, practically all of the other areas, all they've had to do is get the technical journals and scientific publications, and copy.

Whether the rate of increase is quite that great is another question which is subject to challenge even internally in Russia. The point I'm making is, that this 2% or 2 1/2% which is looked down upon, has been the secret of the enormous growth and power of this country. It also indicates the rate at which real wages or real labor income can go up. It is a truism to say "You can't consume more than you produce." Oh, I know temporarily you can draw a lot of inventories or you can get from other countries. But as a long-range proposition, only as you produce can you consume. And so, real wages, real labor income - and let's remember that this includes all of the fringes; all of the non-wage benefits - can only go up 2% or 2 1/2% a year.

You may say, "We can take it out of profits." Well, how much can you take out of profits? Profits before taxes average somewhere between 8% and 10%. Take

it away and what's left? You can do that a little bit, but you can't make a long-run living out of taking it out of profits because there isn't that much in profits.

Productivity: It is the key to long-time changes in our level of living, as we'll see in a few minutes. It is the key to certain government policies which have been suggested in the past few years and particularly at the beginning of this year. And so, in many of these labor negotiations one of the items looked at is how much more a worker is turning out and we want to share in that progress.

Well, closely related to this fourth factor is the fifth factor - profits. Profits don't exist in a vacuum; they develop as the result of many forces, a very important one of which is how much more you're turning out. Actually you can't pay wages on the basis of profits alone because profits are very erratic. You'd be cutting wages in a period like 1962, in many industries, because profits have declined in some industries. In a period like 1960-61 there would be no question about the need to cut wages. But nobody wants to talk about profits when profits are going down. Again, it's a one-way street like the cost of living. When it's a favorable factor we'll use it; when it's not, we won't. Or one side will emphasize it one time, the other side will emphasize it the other.

It is a permissive factor. In other words if other forces suggest proper timing for a wage increase and the profit level is right, then, of course, it can be given.

Finally, the economic environment: As a broad factor this is really the most important because the economic environment deals with the over-all supply of labor in relationship to the demand. Historically we very rarely have had wage increases during periods of unemployment. This is one of the distinguishing

characteristics of the last 10 or 15 years, or, the post-war period, let's say; to have wage increases even in years of declining economic activity. These are the periods when normally you'd expect labor costs to stay the same or go down. Now, actually your labor <sup>unit</sup>/costs tend to move up at such times because output falls off. One of the important elements in short-term changes in productivity is volume. When your volume goes down you don't fire the bookkeeper; the bookkeeper merely gets paid 40 hours for doing 20 or 30 hours worth of work. You don't fire all your supervisors. You may lay off some of your hourly-rated employees in industries like steel, automobiles, textiles, apparel, etc. - you get some adjustment; but you must keep a large number on. And so, your unit labor costs tend to go up, at the very time when you should be thinking about how can you get costs down; how can you make your product more attractive quality-wise and price-wise. You have these pressures. They're not only labor costs. Overhead, for example, must be distributed among fewer units.

To add to that at such times by increasing wages and ~~non-wage benefits~~, makes no economic sense to me. I shall come back to this in a minute.

But these are the things which collective bargainers look at. I'm sometimes amused when my colleagues on university faculties say, "Well, that's all very interesting, but we know that it's marginal productivity or some supply and demand theory, etc." Well, they've never tapped my wire when someone would call, like the steel industry at the beginning of negotiations and say, "Prepare the criteria," meaning these six items. This is what they're negotiating about. They've never seen the confidential minutes of some of these negotiations. I'm afraid some of

them may never have listened to arbitration proceedings where, while it isn't always organized as neatly as this, in most cases it is. There may be overlaps, but when it's all done this is the way they're lining it up. I might say that in most situations it is relatively easy; it's not difficult to determine within a very narrow margin what a settlement will be within the framework of these criteria.

Well, now let me turn to an important phase, the wage-price policy; the so-called guidelines which were laid down <sup>earlier</sup> /this year by the Council of Economic Advisors; and those who would like to see them can look at the economic report of the President, for January '62, where they're contained. What were these guidelines?

Basically, the Council of Economic Advisors has suggested that the average increase in labor costs - now meaning wages and non-wage benefits - should be equal to the average for productivity. Because, if it's equal to the average of productivity, say they, there will be no price inflation. You realize if a man turns out 3% more you pay him 3% more, and your average unit cost stays the same. Well, this represents what may be called the deification of the productivity criterion. What about the other five? Are we to ignore those?

Interestingly enough, what has happened here is that the Council - none of the three members knows too much about wages and prices, I might note - as is often true when people come into a new field; one is an expert in the theory of fiscal policy; another is an expert in the theory of monetary policy; and the third knew something about international trade - which is quite different from the wage-price field, believe me - discovered a truism; real wages can't go up any more than real output per man-hour. It's obvious; of course it can't. But in our economy the

manner in which this works is that somebody may get an increase twice as large and someone may get one half as large, and another may get nothing. We not only have a problem of inflation; we've also got problems of employment. And to establish a wage policy primarily with its impact on inflation as the key element is to ignore these other areas. And, I might add, at a point when the problem of inflation in that area was practically over; the usual cultural lag. Wage inflation, I say to you bluntly, unequivocally, is practically a dead issue. I'll give you some numbers in a moment to prove the point. Here I merely emphasize that these guidelines which, in effect, represent the application of an average to the components of the average. That's what it is. The average is 2 1/2%. You have to prove when you go away from 2 1/2%.

But what is that 2 1/2%? Well, it's a composite of widely varying situations, some which may be much larger to attract labor; some which may be much smaller to repel labor. Why should transit lines even increase their wages? They don't need labor; their problem is how to get rid of them. Why shouldn't electronics increase them more than the average? They need labor. Why shouldn't we increase them more in aero-space and these other areas where we must attract people? Well, they say, 'We're going to make some exceptions for this. We're going to say that when you must attract labor we'll let you increase more than the guideline; when we don't have to attract labor you can increase less than the guideline. And we're going to say if you must attract new capital and you don't make enough in profits we'll let you increase prices even though you've increased wages. If you don't have to attract capital, then you won't have to.'

The trouble with all of this is that this is nice theory, but when you go into collective bargaining the fellow who is entitled to less says, "I want the 3%" - of course, it's really 2.1%; they've used some wrong figures, but that's another question - "I want the 3%." So, nobody wants less than the average. Well, let's face it; would you and I take less if we could get away with it? Well, if nobody takes less than the average what happens to the average? You get the idea.

The fact of the matter is that in a dynamic, expanding economy, diversity rather than uniformity is the key. You can't fit these things into a common mold and have an effective, functioning economy. This is a point that we must understand if we are to understand what is right or wrong with such policy. Incidentally, if this policy were really effective - it's not - we would have wide fluctuations in unit labor costs. Do you know why? Because although the average increase in output per man-hour for the economy is 2.1%, if you take the whole economy; 2.4% if you take the non-agricultural economy over the years, year to year changes vary very widely. Remember, I mentioned that output in a given year is important.

Take an industry like steel as an illustration. In a year when steel activity is recovering, output per man-hour goes up 11% and 12%. Of course, in a year when it's going down, it goes down. So, the average over the years is 2.8%; hours of steel industry, with 12% minus 3%. If you're going to get along with an even 2%, 2 1/2% or 3% - you take the number - what will be happening to unit labor costs in industry after industry, and in the economy?

The interesting thing is, when you impose a uniform level against a widely

fluctuating rate in output per man hour, you must have impacts upon unit labor costs. But there's another interesting element - and I wish I had time to discuss it in detail - this not only represents a difficult problem in the area of wages, but it represents a basic misunderstanding as to how prices are determined. Prices are not determined by labor unit costs.

Let me give you a simple illustration to understand the problem. There is not an elementary economics book - I don't say advanced book; after all, let's go back to the elementary book which doesn't talk about the importance of supply and demand in price determination. Let me tell you what this theory of the Council means. It means you disregard all demand, because they're saying unit labor cost determines price, you see. Well, we've gotten rid of half the textbook. Then they say, "Let's look at supply." Well, in supply we'll ignore such things as changes in inventories; anything other than costs that effect supply." Now that's thrown out. Now let's get down to costs. "We're going to get rid of all costs except labor costs." You know, economists have been wasting an awful lot of time writing these books.

Well, when we talk about universities going to \$40 and \$45 a point, maybe that's rather cheap instead of spending billions of dollars a point to educate some economists. In other words, here we have a theory based upon a truism for the whole economy, which doesn't apply to individual segments, and based upon a theory of price determination which has absolutely no relationship to reality. Apart from that, it's a pretty good theory. For those who think that this is just some academic meandering, I know that in the current issue of Fortune - in the section on labor -

they have a discussion on these guidelines, and you can find in there some of the elements of what is right or wrong with it.

Let me conclude with a few words about wage inflation where I made the rather amazing statement that wage inflation is practically over. What is wage inflation? It really is a rise in unit labor costs because we talk of wage inflation - we really mean labor cost inflation - in terms of a greater rise in labor costs than in productivity, and the result is a rise in unit labor costs. Now, note this, here again, some of my friends on the campuses have missed the boat. It has been assumed, not only on university campuses, but in all the newspapers, that wage inflation means price inflation. But this, again, is an over-simplification and misunderstanding of how the economy operates. Wage inflation may mean one of three things, or a combination. It may mean price inflation; unit labor costs go up and there is pressure on price. It may mean profit deflation because you may pay this unit labor cost rise out of smaller profits. Or, it may mean a decrease in other costs, and since most of these costs involve labor - unemployment.

In other words, wage inflation can mean price rise, profit decline, and/or unemployment. Which will it mean? Well, in periods of expanding activity, when it is easier to get higher prices - and if we look at the period, say, from '55 to '57 it meant higher prices and a modest shaving in the profit margin. But when you look at a period like '58 and '59 when you couldn't get these higher prices it meant not an increase in prices but a decrease in employment opportunity.

I think there is no mystery as to what our unemployment problem is; we have priced labor out of the market. And we must recognize that. But I said that wage

inflation has been decreasing. First, let me give you some idea of the magnitude. From 1939 to 1957 - to take the period when it may have been most important - output per man-hour rose by 51%, and average hourly earnings - which isn't the whole package, because you have to add these fringes in - rose by 229%. In other words, a fellow who was turning out 100 units turned out 150 units, and instead of being paid \$1 per 100 he's being paid \$3.28 in this illustration, for 158. Obviously, unit labor costs doubled. This created tremendous pressure on the economy.

And, it makes no difference what period you take. If you want 1950 to '57, 21% in output per man-hour, 41% in average hourly earnings. Now, I said that wage inflation was coming to an end. Let me give you some figures which most people apparently haven't bothered to check. From 1947 to 1950, average hourly earnings plus the fringes rose about 8.7% per hour; not in every year; you know, some a little more; some less - but that's the average. From 1950 to '54 they rose 5.8%. That first one was '47 to '49. From 1955 to '58 they rose 4.8%. And from '59 to '61, by 3.8%. Notice, from an average annual increase in the first three years of 8.7%, slowly but surely went down to 3.8% as of '61. Now, remember, this is against an average base - depending on how you want to measure it - 2%, 2 1/2% - you might come up to 3% for the post-war period - but whatever you take it's obvious that a declining rate of wage inflation has been occurring.

But, what happened in 1961 and '62? First, the automobile industry - you remember, a key wage bargain area - made settlements averaging about 2 1/2%. And then this year the steel industry made settlements averaging 2 1/2%. Incidentally, that covers this year and next year; and the automobile industry covers next

year. So, we have a pattern already followed in aluminum, railroads and other key industries, of about 2 1/2%, 2 3/4%, 3%; you take the number, it makes no difference. But, it is less than 3.8%. And so, this declining level of labor cost increase against this average level of output per man-hour has continued to the point where the differential between them - wage inflation - has virtually disappeared.

Well, you may say, "How come? Are there any basic forces which have taken place which assure us that this isn't temporary; that it won't be reversed? How can you make such a flat statement so contrary to public opinion that wage inflation is practically over?" If you'd like to watch me, I'll purse my lips and show you how you say it -- "Wage inflation is practically over." That's how you say it. But the reasons for it; that's the important thing.

You must realize, in the earlier post-war years we had a tremendous deferred demand carrying forward from the war, which lasted longest in the building industry, although a shorter period in automobiles, and was very important for a number of heavy industries. Then it got a little stimulus; not too much, by the Korean War, because there wasn't too much deferred demand during that period.

Secondly, in contrast to the tight situation which meant that you could produce and get your price, surplus capacity has begun to develop many industries. The aluminum industry is operating at about 85% of capacity. The steel industry - I forget the current - they can sell somewhere in the neighborhood of 70% or 75% of capacity. Even the electric power industry which was so tight, had the largest amount of excess capacity above peak loads that they've had since the early '30s.

This is part of a very important problem; more difficult, you see, to get the higher wage back or the higher labor cost back.

Foreign competition: This has played a marginal role, which is not as critical as many people would have us believe, but it is important. If you want an illustration; I had occasion recently to examine the electrical machinery industry. You know there is quite a bit of beefing about how badly they're faring from Japanese competition. The first thing I discovered was that in 1959 we imported \$79 million of electrical equipment, mainly radios, transistors, etc., from Japan. That's pretty bad. Of course, we exported \$75 million worth of electrical equipment to Japan. We don't hear about that.

Look at the over-all figures. It is true, as they say, that imports have increased a hundred-fold. Why not? They were practically nothing before the war. The highest we ever reached before the war, in imports of electrical equipment was \$3 million. And they have zoomed up to \$300 million. Now, gentlemen, that's a lot of zooming. Exports have only gone up ten-fold; from a \$100 million to \$1 billion. And so, in this horrible situation, instead of selling \$97 million more than we were buying, we are only selling \$700 million more than we were buying. You see, you can make a big fuss about that \$300 million if you don't pay any attention to the \$1 billion. And you can do this in many other industries.

Now, I'm not in any way trying to belittle the importance of foreign competition. Because, whether it's a large amount or small amount it begins to put marginal pressure on American industry. And this has played a role, particularly in the steel industry, where we used to export much more than we import, and now the

imports in the early part of this year were running a little higher than exports. The whole amount is small, you understand. We produced maybe 100 million tons of steel and we're importing 4 million. Actually, it's wire or reinforcing bars which have had the big pressure. I remember, Roger Blough gave a speech, "A Tale of Two Cities," in which he pointed out that Germans could sell steel in Cleveland more cheaply than, say, Republic Steel; that was true for wire. But Republic Steel could sell plates in Dusseldorf more cheaply than the Germans. It depends on what product you looked at.

The important point, though, is that the increase in domestic competition, the increase in capacity, the end of deferred demand, foreign competition, has stiffened the backbone of American industry because they know they can't get it back from the consumer. This has changed the basic negotiating picture. You see, this is part of the economic environment; that's why that's so important.

I see my time is up, so just let me conclude by saying that this threat of wage inflation which is the wage-price relationship in that area, has been significantly reduced. Now, that doesn't mean the threat of inflation is all over. We may get it through the fiscal route - unbalanced budgets and areas such as that. But today the wrong place to look for these pressures is in the wage-price relationships. Here the margin has become so narrow that you can manipulate around it, particularly since cost doesn't determine price, and even more particularly, since wages - a part of cost - don't determine price.

QUESTION: I wonder if you'd discuss the unseen man at the negotiating table

- the government - what the program role of the government is?

DR. BACKMAN: Well, the unseen man who will be visible on the Supreme Court Bench shortly, actually plays a role only in some key wage bargains. It's rather interesting - I should have mentioned that one of the areas where the guidelines have just been ignored completely, is in building construction. There, 6%, 7%, 8%, almost anything you can get has become the rule of the day, and has been for a long time, because these are local situations where you don't get the dramatic impact in terms of a national policy, and you can't move into every one of them; you don't have enough men in government to go into all of these things.

So, it is steel, railroads, airlines, and automobiles, and a few key areas - maritime unions - where, on occasion, the government goes in. I'm one of those old fashioned people, Mr. Peterson, who thinks that the role of government should be that of a neutral and an umpire.

Now, what happens when government comes in is that almost unavoidably one side or the other gets some benefit. It is an historic fact, for example, that up through about 1952 there was a door at the side of the White House that was open to labor. For example, in railroads - where I've had a little experience - the unions practically never accepted the recommendations of a Presidential fact-finding board and the railroads always accepted them. Well, frankly, I don't blame the union. They knew that was the least they could get. So, by going into the White House, if they were able to get a little bit more, they got it.

You may remember back in 1946 when Mr. Truman got on the air and excoriated the engineers and firemen for the terrible thing they were doing in not accept-

ing a fact-finding board report, and then he gave them another 2 1/2¢. Well, now, if you're a labor leader it's your job to get what you can for labor; it's not your job to be a labor statesman; that's a lot of nonsense. And I think those people who say George Meany and the others must be statesmen, don't understand who's paying them and what their job is. It's their job to get what they can for their people and they do a bang-up job of it. And, it's management's job to negotiate on the other side. And so, I'm a little bothered about the situation when government goes in. I think a few good knock-down, drag-out fights will have some temporary hurts, but longer-range benefits.

To illustrate; the Eastern Airlines situation. Eastern Airlines has done something which relatively few companies are willing to do. They've taken it on the chin. But if they win this battle with the flight engineers they're going to have some tremendous benefits in the long run, as will other companies who will take heart, and other unions who will ease up on the pressure. This is a bargaining situation.

Now, there are critical situations, aerospace, for example; certain times in the maritime unions when the food supply may be threatened. And here, I think, there is little choice but for the government to move in, and to at least try to bring the parties together. I'm one of those who think that the President should have an arsenal of weapons, a wide variety of things, so that uncertainty is created. I think that one of our problems is that there has been a little too much certainty. Let be able to do a lot of things, some of which will help one side, some of which will help the other, and nobody knows where it's going to come out. But stay out of it unless you're absolutely forced in, and believe me, that must be a real burden

of proof, of being forced in.

QUESTION: Dr. Backman, I'd like to hear your comment on labor's effort to reduce the work-week to 35 hours.

DR. BACKMAN: Well, let's look at that. A reduction in the work-week from 40 to 35 hours, if everything else remained the same, would involve what? First of all, your labor costs would go up from, let's say, \$1.00 an hour at 40, to  $5/35$  more, which would mean \$1.15. This is the arithmetic of it, which is a rather heavy burden, since productivity is going up 2%.

But secondly, if everything else remained the same, what is the unemployment situation? We now have a total labor force running close to 70 million, and we have a non-ag employment - what is it, Dr. Poppe? - about 55 or 56 million now. If you increase that by  $1/7$  you're going to make about 8 million jobs. But what is our unemployment problem? It's a problem of about a million people. You say, "Wait a minute; what are you handing us? We all know the unemployed total is 4 million." Of course you know that, and I know it too. But in our economy with 70 million people even the President says you must have 4% unemployed, not because you want people unemployed, but because you have seasonal jobs like construction, apparel, summer places, and retail trade around Christmas. You have people moving from job to job.

Just between our sessions we were talking about the great mobility of all sorts of people including many elements of American labor. You have the unemployables. Do you know that during the war all you had to do to get a job was to climb a step this high to show that you could negotiate it. We had no less than 500,000

unemployed at any time, because there are unemployables in this picture. So, we generally figure - and it depends on who does the figuring - that something like 3, 4 or 5% is what we call "frictional unemployment;" - "frictional" - the natural developments in a free economy making it difficult for everybody to get a job, because the pieces can't fit together that well. Today, when you have four million unemployed, have you picked up the newspaper and seen how many columns of want-ads there are? But they're always the wrong things, you see.

So, if we were to cut our unemployment from four million down to three million or 2 1/2, all this pressure would be over and we'd be operating what, for all practical purposes, is full employment. Well, now, a 35-hour week is going to create a serious problem in that connection. Because, what you've got to find is a million jobs. And what that finds is something like five or eight million jobs.

Moreover, I think that there's a great mis-reading of history. It's not I think - I know; a great mis-reading of history. It's not true that in the past when the work-week was reduced wages remained unchanged. When we went from a ten-hour to an eight-hour day the workers got nine hours' pay. That was the general rule. But in the early '30s, which is usually drawn upon to prove that we got 48 hours' pay for 40 hours' work, this is nonsense. We were down to a 35-hour week. Some of you are too young to remember Scotch weeks when you worked part of a week or when you worked every other week, which was what was happening in the depression of the early '30s.

And so, when we went to a 40-hour week we didn't pay people 48 hours' pay; they were very happy to get 40 hours' pay for 40 hours instead of 35 hours' pay for

35 hours' work, or 33 hours' work. And so, historically it is not right, although there are a couple of exceptions; on the railroads, where they misread the experience thanks to a badly botched job by management in putting in its case. They gave them 48 for 40 in 1949 when the 40-hour week went in for the non-operating employees. Transit workers in New York, based on the railroad pattern did the same thing. And that's about it. There are very few cases beyond that. And so, there is a mis-reading of history.

The facts are difficult to come by, but I had occasion to go into this rather thoroughly. I don't think the answer is a 35-hour week today. I think the answer is to make sure that a man gets paid what he's worth for the job he's doing, and not over-pay him. I should have mentioned earlier that one of the consequences of raising these labor costs too much is to increase the incentive for automation, and the substitution of capital equipment, which then bounces back in terms of fewer jobs. But let's not misunderstand that one. In the last six years when we've been talking about the problems of automation - which, incidentally, was only a term we invented about ten years ago, you know; we've had this process for a long time; it's sort of like people dying now of cancer; they always died of cancer; we just didn't know it was cancer. Well, the figures show much bigger proportions than they did before.

One of the items that I like to refer to is that a lot of people died of heart attacks. Sure, they were stung by bees in a field; people didn't know how to measure these things, you see, so people had all sorts of excuses as to why people die, but now we get a little better analysis. The same thing in this area. It's a very, very

interesting area because there is so much misinformation and so much talk from the mind - rather, from the heart, which becomes the seat of the mind, rather than from the mind. Your emotions, you know, play a very important role here. I think this is all part of this 35-hour week picture which we want to keep in mind.

QUESTION: In the wage-price relationship could you give us your analysis of government pressure on steel to hold the price-line?

DR. BACKMAN: Well, I was on the outside, so, I can talk very frankly about it. In the first place, I don't accept the statements that are made that the government held down the settlement in steel. I think informed observers will agree that as soon as the automobile settlement was completed, and you must understand the rivalry between Dave McDonald and Walter Reuther - this is the core of that - that the steel settlement was already in the bag. The only question involved was this. The automobile workers went to a non-contributory welfare fund which steel had given before, and that involved 6¢. Would Dave McDonald be able to steal that one or would he have to give it back? That was the only question involved. The mechanics of the package; this, of course, was involved, but not the total.

But now let's turn to the price end of it. I would suspect that it's difficult to find a poorer illustration of public relations than the manner in which U. S. Steel handled this. I think this is putting it rather mildly. Frankly, I think it takes a blind spot to go to the President of the United States - I don't care whether you like the President or don't like him; this has nothing to do with it; I don't care who that man in the White House is, he's still the man in the White House - and give him a Press Release, and say, "In a half hour it will be on the wire." I don't care if it's

Mr. Kennedy or anybody else, there would have been a reaction. I don't think it would have been as violent with one man as with another. Of course, this was really violent - I'm told. I think the important point is this; that when this happened steel was in error and I think Mr. Kennedy was in error - if you don't mind my criticizing your boss. I think they both were in error. And I think somebody told that to Mr. Kennedy when he stopped talking; it took him about 48 hours. And I'll tell you why I say that; I'm not speaking now, just to be humorous; I'll tell you why I say that. For the first two days, when the FBI was getting the newspaper men out at two o'clock in the morning and Mr. Kefauver was making his speeches and Mr. Sells was making his speeches, everything was going at full speed. And I think at some point somebody said, "Mr. President, you realize that one of the effects may be greater unemployment?" What did you say? "Greater unemployment." "How do you figure that?" "If we affect adversely the inducements to invest capital which is the key in our lagging economy, this will mean unemployment."

Now, why do I say that must have happened - and I don't know, frankly - and I'll tell you. Because we have had the amazing, the incredible, the unbelievable situation until the last couple of days, of Senator Kefauver being quiet. Now, you don't know what this means because you don't live in a situation such as this as I do.

Let me tell you, for example, how Mr. Kefauver acts. I believe it was in 1959 when the next component of a wage increase was due. 30 days before, he began giving speeches on the Floor of the Senate; the first day, 30 days to the next price increase; 29 days to the next price increase; 28 days to the next price increase in

steel. He has made a profession out of steel, you see. And then, when they, thanks to my efforts, didn't increase prices on one day; two days, thanks to my efforts, they didn't increase prices; I say this; that when Mr. Kefauver and Mr. Seller, both of whom have been business-baiters in this area, and both of whom jumped into the fray - if you'll look at the newspapers of that time - immediately, when they remained quiet, somebody must have called them in and said, "Boys, for the good of the party." There has been no silencing of these two men before or since.

Now Mr. Kefauver has gotten himself in a box because in the flush of enthusiasm they sent out these subpoenas, and when a couple of the companies said no, they now have no choice but to say, "Well, now, you fellows had better come in or we are going to cite you for contempt." I think the hope is that the Fuller Judiciary Committee will vote them down. They have no choice, really. If you have a subpoena and you don't answer it, you must try to do something about it.

But to me, the most significant thing is the way the federal government right across-the-board has stopped talking bad things about steel, about the terrible things they did; within 48 hours it stopped - just like that. But more significant, the fact that Congressman Seller and Senator Kefauver haven't been after the headlines every day. This could only be because somebody told them.

Now, I'll tell you this. I could have gotten steel, I think, \$450 million which was involved, without anybody saying "boo." I think it was a very inept job. I'll tell you how to do it; it's no problem. The first week you increase the extras maybe \$10 a ton. The next week you cut reinforcing bars in the interest of protecting

our international balance of payments because of competition from abroad, 20¢ a ton. The third week you increase plates because of the pressure. The fourth week you cut wire. You do it separately over a period of a couple of months. You get a few cuts in there which you probably should have anyway; you get the big increases, and nobody says "boo" because there's nothing to say "boo" about. That's the way it should have been done if this is what they need.

I think the facts since the embroglio have shown very well that Mr. Kennedy's information about steel profits was wrong. Republic Steel just cut their dividends; Wheeling Steel just cut their dividends; and the others aren't covering their dividends. He talked about profits that were going through the roof. But, as I said earlier, his advisers don't know too much about wages, prices and profits. This is an illustration.

QUESTION: I just wonder about the labor dispute between the Northwestern Railroad and the Telegraphers' Union. Is this a new era in labor relations?

DR. BACKMAN: The tightening of the battle against feather-bedding is relatively new. But actually there have been some advances in this area. Standard Oil of Indiana was able to reduce work crews. Pittsburgh Plate-glass sent 38 issues to arbitration and in 31 cases they were able to cut work crews.

Up in Canada back in 1957-58 the firemen who will be next in line in the railroad situation finally lost out and they don't require firemen on diesel engines because the way it has worked out is something called "attrition." You don't fire the man except those who happen to be employed after the date of the request; but you don't have to replace them. So, until a fellow retires or is pensioned or dies, or quits

voluntarily, or is fired for cause - and that can't be captious, you understand - it must be genuine cause, you don't lay them off. If a man is on vacation you don't replace him. If a man is sick you don't replace him. What you do is protect the worker; not the job. Because that means you don't protect the union; that's what this is all about.

You see, the telegraphers who are working are being protected, but if you don't protect the number of jobs, which is the issue in the Northwestern Railroad situation, they want to freeze the number of jobs and the union is out of business. This creates a serious problem for the union.

As far as I can see, I can understand undertaking programs to protect the worker. In fact, I've recently reviewed many of these programs and I'll try to remember to send down to your library two rather extensive analyses which will shortly be published, on all the things that can be done to cushion the impact. I'm all for them. But I don't want to protect jobs; I want to protect people. And in the Northwestern Railroads the issue is, how do you protect jobs. The same thing is true with the firemen. They need firemen on those trains as much as they need you and me. We can contribute just as much. Their job was to stoke an engine; that job has been engineered out.

QUESTION: A while ago you mentioned that automation is nothing but a new word and something which has been around for a long time. Don't you feel that modern computerized automation is a horse of another color and may, in fact, decrease the bargaining power of unions?

DR. BACKMAN: The impact of automation, I would suspect, while important,

is less than the introduction of machinery. In other words, this is a matter of degree; it's a matter of ~~the~~ times. If you read some of the literature back around the late 18th Century and early 19th Century, the impact of machinery was much more horrible than anything we are talking about now. Yes, I think that this accentuates a trend. I think that this creates a problem. But there must be people who take care of the machines; there must be people who program them; there must be people in many areas to do jobs. We have become a more service-oriented economy.

You know, the total employment in manufacturing, which is the main impact of this stuff, has remained relatively unchanged for the last eight or ten years. But the jobs in service areas have gone up - the total number of jobs has gone up. So, I would say that this is a matter of degree. But in terms of newness it's like saying that atomic energy is the most fantastic thing that ever happened. I don't know how much more important it is than the discovery of electricity; ~~maybe not~~ as important. As far as electric power is concerned it's only another way of generating electric power. You and I in turning on our lights won't have better lights because of it.

Now, I'm not trying to play down atomic energy. It has certain importance which is more familiar in your area of the economy than in my area; and it does play a role in medicine and other things, but not the overwhelming role when you stop to think of some of the other major inventions. I think we have to look at automation the same way. There are places where it does away with jobs. There are other places where the main effect is not to increase the number of jobs, as in the insurance field, for example, when you automate the clerical jobs. They haven't

laid off anybody there. All that happens is that you don't have to hire as many new people.

Of course, there's one very interesting thing about all of this. Historically, throughout the ages we've tried to lighten the burden of mens' work. Now we get into a situation where, if we are successful, we've got to worry about it. Technological unemployment, which is the real thing we're concerned about, has been with us almost from the start of the Industrial Revolution. The number of jobs has gone up and up, and I've indicated even in the last few years we've made 800,000 jobs a year; I forgot to give you that figure before. With all of this concern about automation we've made 800,000 jobs a year in the last eight years. Our problem is, we increased the labor force by about 7 1/2 million and we only made 6 1/2 million new jobs, so we have this increase of a million unemployed.

During this period since we have first become concerned about it it has not been a major factor in unemployment.

QUESTION: Has the import of foreign cars really hurt the American automobile industry?

DR. BACKMAN: Any time you have to give up a sale it hurts. Let's face it; none of us like to give up what we've got. At its maximum the import of foreign cars ran up to 650,000 which was approximately 10% of a good year - a little less than 10% of a good year. In the year it took place it was a little higher. I think it stimulated the American companies to do something they didn't believe the American people wanted.

Now, some of you are old enough to remember in 1939 we had a little car

called the Crosley. You could go into Gimbels and buy it and practically carry it home under your arm, it was so small. But you see, it wasn't nice to drive around in a little car like that. There was no status attached to it. Did any of you see this recent little cartoon with the chauffer talking to the doorman and the one was saying to the other, "Do you know, we're status symbols?" There was no status in driving a little car. Then we came into this period in the early post-war years when there was a shortage of cars. We began to get these MGs and the Austin-Healeys and the others, and it began to be a very interesting status symbol if you bought a new car.

I know a fellow who has a car as long as this room, literally, with a chauffer and everything else. I'll never forget; one night I was out to his house for dinner and he was telling me when he drives his MG and he stops for a light, people come over; he was getting a big charge out of it. A lot of people got a charge. And all of a sudden the small car, instead of being declassé became the thing. And when they felt the pressure of this 650,000 cars they began making small cars themselves.

Now, obviously this has hurt a lot of people. Steel - you don't sell as much steel for a small car as you do for a large car. This is something that has been overlooked in the lagging steel industry. I don't mean overlooked by them; they know about it; but in much of the public discussion.

The same thing is true in other areas. So, how does it help the automobile industry? Profits seem to be holding up. They've been forced to use their engineering ingenuity which is unsurpassed, to meet a challenge which they could have met

all along if they thought that the consumer would buy it. Hurt? A little bit. But other benefits.

QUESTION: You mentioned the competition with the Russian economy as far as the rate of growth is concerned, but you didn't mention that we hear so much about France, Germany, and Italy - their miracles, etc. etc. Would you give us some of your views on what happened there and where they are going?

DR. BACKMAN: Well, you must recognize that all of Europe was pretty stagnant before World War II. In fact, one of the interesting things about the post-war period is that it wasn't until almost about the time of the Korean War and afterward, that many of these countries even came back to their pre-war level. Now, the base from which you start is a very important factor. And the base from which these countries - Japan and Western Europe started, was rather low. Percentage-wise the increases can be rather large. And they have been.

I think these countries, particularly those which will be part of the Common Market, face a tremendous growth. But something new is being added in that area. The things that you and I take for granted; the ability to move across borders, the ability to buy something produced in New York, Washington or Illinois, or any other place throughout the country, without paying taxes and tariffs; without showing all your luggage if you want to move. I tell you I came right down here. I didn't have to do anything at the airport but get into a car. When I was in Europe last year, believe me, every time I came into an airport bags were being opened and closed; statements were being signed; all sorts of things were happening; not as much as we do; we made a real mess out of that.

We encourage people to come in and then we leave them standing at the airport for hours while they're being checked through. You really move through most of these countries pretty rapidly. But I didn't have to do that when I came down from New York to Washington. In Europe they've always had to do this, you see. The result is that this breath of freedom, the thing that we've taken for granted since, oh, roughly, the abandonment of the Articles of the Confederation, I guess - the Constitution - 170 years some-odd, they are now discovering. And this will make a tremendous impact on growth in all of those areas.

You see, what is happening is this. A country like France would produce for 40 million people, and the economies of mass-production that we could get for 180 million people they couldn't get. Now they'll produce for a market of 200 million people. In other words, instead of splintering among these different countries you will have a tendency, in time, for a concentration on the West Coast, as we have, and on the East Coast, and down South, or wherever it may be. This concentration will mean that Italian factories will produce much more than they did and get the advantages of mass production, productivity, automation, all these things. France will produce different things and West Germany different things, with all of these advantages coming in, plus the enormous stimulus which comes from freedom of trade.

It's very interesting. When people are permitted to produce the things they want to produce, do the job they want to do, how much more they can produce, than when they have to produce everything. Take your own situation. Suppose you had to produce everything you need yourself. Suppose I had to make my shirts and

ties and suits, and grow my food; how much would I have? But as soon as I specialize in just hot air look at the way it balloons up.

COLONEL SMITH: Dr. Backman, I hate to cut this off now, but these gentlemen must get to their seminars. We hope that you're going to visit us at the seminar.

DR. BACKMAN: I'd be delighted to.

COLONEL SMITH: May I, on behalf of the Commandant and of the student body, thank you for a very stimulating and interesting morning.