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International Distribution of Economic Power
by
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Colonel Jordan and gentlemen of The Army Industrial College.

I oftentimes wonder why anybody wants to hear an economist talk after what has happened in the last seven or eight years and all the economists have said that was not true. I was saying this to a gentleman the other day, a neighbor of mine, and he said "Well, I suppose it is illustrated by an experience I had a few nights ago when I was coming home." He was walking up the hill toward his house when he saw a man out on the tree lot, who, down on his hands and knees, seemed to be looking for something. My friend stopped and said to him: "Did you lose something?"

"Yes, I lost my watch."

"Maybe I can help you find it."

"I wish you would, I do not seem to be making any headway myself."

So they both got down on their hands and knees and pawed up the grass for quite a long ways around there, but they did not find the watch. My neighbor did, however, discover that the man was somewhat the worse for drink, so he said "Well, brother, let's organize this search and see if we cannot make a little more headway. You try to remember where you dropped your watch and we will start there, expand our

activities, and, I am sure, find it sooner or later." The man said.

"I dropped it across the street about half a block down."

"What?"

"I dropped it across the street about half a block down."

"Well' What are you looking here for?"

"This is the only place there is any light," he said.

All of which is a polite way of telling you that while the economists may have been in confusion in the last seven years as a result of the occurrences since 1929, nobody else is free from that difficulty, and they still know what the problem of economics is, and know a few other things, they think, and they hope by studying the experiences of the last seven or eight years to get a little more exact knowledge.

I dare say that anybody who has ever had any experience in warfare has a little of that attitude toward what he has learned about the tactics, and whatever else you do learn, that is supposed to have some bearing beforehand.

But be that as it may, this problem that we are going to talk about this morning, the international distribution of economic power, is one that must ever be of a great deal of interest. It is of a great deal of importance to you as the representatives of the nation. Certainly in these days when economic power plays such an enormous part in national defense and offense, it is important to know something about the economic power of various nations of the world with whom we are apt to have contact. In that respect, in a much

broader sense than that, a much more humanitarian sense, all the nations of the world today have democratic ideals; that is, higher standards of living for everybody, more leisure. Standards of living run largely in economic terms which mean that a standard of living where you consume a lot of things is better than a standard of living where you consume a few things, and since most of the things, a great many of them at least, that enter into our standard of living have to be produced, they cannot be gotten free as a gift of nature, the question of the productive efficiency of the various nations is a question of great moment.

If you have gone to Europe, undoubtedly you have been impressed with the great controversy among nations about this matter of national income and national wealth, although national wealth is not of so much consequence as national income. Wealth is, relatively speaking, small when you compare it with the annual flow of income. The production of goods and services of nations very often are the cause of a controversy when it comes to the question of which nation is paying the highest taxes. England and France are always having a row as to which is paying the higher rate of taxes - if one is paying the higher rate of taxes it could pay its debts or stay on the gold standard. The world is considerably concerned with this, and I will make the prediction this morning that one of the developments in economics that is started now, and that is going to be most potent and engage the attention of the people a great deal in the next fifteen or twenty years, is just this question of the relative wealth of

nations.

In our day we have another special reason beside the military and general social reasons. We have a great conflict between different theories of government, different theories of industrial organization - organization for the production of the things we want. Collectivism is in the saddle. I suppose one could paraphrase Emerson today and say fairly that which he said in the last century - that the political thinking of the nineteenth century had been dominated and controlled by the idea of democracy just as the moon controlled the tides of the sea. There is no use arguing with the tides, there is not much use building dams against them - they are dominated by a power far outside - the moon. And so certainly in the last twenty or the last ten years, particularly in the last six, even in this country public thinking has been dominated largely by the idea of collectivist government, control, planning, etc. Whether it will turn out to be another movement that is as dominant in the control of industrial organization as the moon in the control of the tides of the sea, or will be as powerful as the idea of the last century, remains to be seen. Nevertheless, we are much interested in these various types of industrial organization.

We have a very great experiment in Russia. We have another one, of somewhat different character but nevertheless collectivist in the sense of controlled economy, in Germany. We are interested to know what has been the success of nations and of systems thus far in the matter of providing its people with an abundance of economic

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goods, for wherever the production is large, there the international wealth and power is large, and where the production per capita is small, there the national power will be small. The trick of course is to get some way of attacking this problem. I suppose if you could have a commission in every country, or get the countries to cooperate, have every country take a census, and an honest one, of all the things produced every year, keep that up for ten years throughout droughts and vicissitudes of weather and of business cycles, you could get actually a comparative picture, but the trouble is, first, that they would never tell you about a great deal of it and, second, you cannot get them to do it; they haven't time to stop and do it, they won't do it anyhow.

I am brought here for the purpose of trying to give you, in the course of forty-five minutes, some general notion as to how to go at this problem, and the best way to do that is by illustrating the method by which to tackle the problem in these various countries, and leave you with some kind of picture as to what the comparative economic power is, say, of the United States, France, Germany, Russia, and possibly Japan. I always say to this group, as I speak to them from year to year, and to people elsewhere when I speak to them on this subject, that if you are ever charged with the task of ascertaining the relative economic power of a nation, or of two nations, (usually it is another nation compared with ours, or even two other nations with each other) that this is the most effective and economical piece of technique that I have found. You ask, first of all, what part of

the labor power of the particular country you are dealing with is absorbed in providing the people of that country with food and the elementary textile fibers? If you want to add something to that, add all the rest of the raw materials: coal, wood, fish, steel, etc. That simplifies your problem a great deal, doesn't it? The first thing that every nation has to produce, if it is going to remain alive at all, is its food, and it has to produce enough textile fibers, either directly or by import, to clothe its people and give them those household goods they need. As a matter of fact, it has to do more than that - it has to get fuel for heat, and, if it is going to indulge in manufacturing, it has to go beyond that and get coal and iron ore, etc., but it has to feed itself, and, in a rough sort of way, you can say that among modern nations, nations such as the nations of Western Europe - England, France, Germany, Italy, Belgium, Holland, and even Russia, there isn't such a wide difference in the amount of food that has to be produced per capita. I do not know how much it varies. I suppose that the people of Italy may eat thirty or twenty per cent less than the people of the United States, probably not that much; the difference may be largely in the quality of food and the variety of it, but somewhere, somehow, those must be pretty close together, and if we are comparing other countries with the United States we can be perfectly sure that none of them eat more than the United States; that is, none of them have to produce any more food per capita than the United States. Ask yourself that question first. I am not now saying how it came about that there are these differences among the

people - we will come to that a little later in the hour.

There are these amazing differences among the countries mentioned: In the United States we have only about twenty-two per cent of our people on the land. It is doubtful whether the next census, the census of 1940, will show much more than twenty per cent of our workers actually on the land, one family out of five. If we can have the blackboard brought over here and some crayon, perhaps I had better put that down so you can check me up as we go along. We are self supporting in the matter of food. That is, twenty, or at most twenty-two families (that was the percentage in 1930) on the land produce enough food for all the people in the United States, enough food for export to pay for the food imports, and also, in addition to that, enough cotton for ourselves and for one hundred and fifty million people outside the United States, and some wool and some flax. The cotton exports paid for the other textile imports, such as silk and flax, etc., and in fact paid for most of the rubber imports. We did all that with twenty-two per cent of our labor force, twenty-two families out of a hundred living and working on the land.

Another country that is somewhere near self supporting, France, about which you have heard a great deal as military men in the course of the last century or two, has just about twice that percentage of people on the land. France has, roughly, forty-five families out of every one hundred living and working on the land, and that forty-five people out of a hundred, that forty-five per cent of the population, does not produce quite enough food to feed the French. It would if

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France did not have so many tourists - there is an enormous tourist population there always. Leaving the tourists out, the French, I think, are pretty well self supporting in the matter of food. They do not raise as many textile fibers as we do. They raise a little wool and some silk, but no cotton at all - all that has to be imported. By and large, certainly more than forty-five per cent of the labor power of the French people is spent either directly on their own land or in producing other things, perhaps services to tourists, or goods to export, which are needed to pay for the imports of food and textile fibers.

In Germany you will find that that figure is somewhere around forty, now somewhat less than forty. They have been making desperate efforts in the last dozen years to step up their food production and the efficiency of their agriculture. They have made considerable headway with it but still the figure approaches forty per cent of the population, certainly something like thirty-eight. That does not mean they have thirty-eight per cent of their people living on the land (they probably have less than thirty today) but they have to import a great deal so they have to export some of their product to pay for the import, except in those periods when they can borrow money from us and not pay it back, but that does not happen very often. What they got from us by way of borrowing they paid to France; France left it on deposit in England and in the United States, and finally in 1931, or thereabouts, they drew the gold from England and from the United States, thinking they were very wise, but they have

been in trouble ever since. After all, you have to produce the food first before you get any place else.

In Italy we find that about sixty-five per cent of the people are working on the land, sixty per cent at least. They do not produce food enough to feed themselves, they do not produce many of the textile fibers, and surely sixty-five per cent at the very least of all the labor power of the Italian people is absorbed in providing them with food and the elementary textile fibers. In Russia that figure is about eighty-two per cent. It is somewhat better now. They may have gotten it to the point where seventy-five per cent of the people produce the food and the textile fibers, but I doubt that. I think the figure is still near eighty per cent. That figure in Japan is around seventy-five per cent. Let me set those down in front of you. (Placed following tabulation on blackboard)

Per cent - Food and Textiles

United States.....	22%
France.....	45%
Germany.....	38%
Italy.....	65%
Russia.....	80%
Japan.....	75%

I have now told you as much about the economic differences between the various nations as any other economist, or any house full of them, can tell you if they lecture two weeks to you. Nobody can tell you any fact that is as significant as that fact I have written on that blackboard. That is modesty for you. For a very simple reason have I told you more. Those people you have to have, you have to feed

your people, war or no war. You cannot get away from that at all. You can organize and reorganize and do all that you please to your population but you still have to feed them first and get those raw materials, that is all there is about it. You cannot store up much food. You can store up some textiles linen, cotton, and woolen cloths, etc., and that helps a good bit - some nations pursue that.

Now let us look at the people who are available for industry

United States.....	78%
France.....	55%
Germany.....	62%
Italy.....	35%
Russia.....	20%
Japan.....	25%

That is what you have left now for what? For all the rest of the activity. Let me say, by the way, that if I had included, as I probably should have, the raw materials, that is, the number of people it takes in the United States to dig the coal out of the ground, produce the oil, the iron ore, the copper, and all the minerals that we can produce, it would add an amazingly small number to that percentage - it would be still well under thirty per cent in this country. You have then, you see, these other people that you can do manufacturing with, mining, (I have not included mining in my first column) fishing, forestry, transporting of all this raw material to the place you are going to manufacture; the people who work in the factories and shops and manufacture that material, the people who transport it back onto the railroads, all the building workers who take this building material and direct it into buildings, and the people who keep it in the stores

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and shops and depots for distribution to the public, either by formal distribution or by distribution by way of sale in stores. They are the people who are available for the manufacture of electricity, the telephone service, and for all other sorts of transportation; the people who build the roads and provide services for the automobiles - provide them with gasoline, oil, etc. And finally, they are the people also who are left over for various kinds of professional services teaching, preaching, singing, barbering, beauty parlors, and all the rest of those higher activities for civilization.

There is your picture, and, in a way, I might just as well close the lecture now as far as giving you the thing that you will think about, because you will be thinking about this the rest of your life if you stay in any line at all that involves an economic question. That is quite a little trick, to be able to give men in the course of twenty minutes or half an hour two sets of figures that you can say, in all honesty, you will be the rest of your lives thinking about and watching the modifications that occur there.

We talk about Russia a great deal. You can tell perfectly well what is going to happen there if they can stay at peace (that is, if Germany will leave them alone on the one side and Japan on the other) and devote themselves to economics entirely. Russia is going to spend the rest of your life and mine (if you are forty-five years old, which is probably a fair average of you men here today, and will live another thirty-five or forty years) doing just two things - cutting that eighty per cent down to fifty and raising that twenty

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per cent to fifty. You may say. "That is kind of overdoing it, don't you think?" Well, let's look at it. There are 175,000,000 people in Russia now. Eighty per cent of 175,000,000 is 140,000,000, so they have 140,000,000 people living on the land over there, as against 30,000,000 here, and 35,000,000 living in town. The 35,000,000 people living in town are the manufacturers, the railroad people, the merchants, and the professional people. Now when they get to the point (say the population is growing) when there are 200,000,000 people in Russia, as I suppose there will be in forty years, and half of them are then on farms, a hundred million, and the other half are in the towns, a hundred million, there will be a hundred million people in town as against forty million. That means they will have to build towns, residences in towns, water systems, sanitary systems, schools, and factories, etc., to keep sixty million people housed and busy. It is quite a little job to provide housing and factories, etc. for sixty million people. If you want the proof of it, let me ask you what the population of the United States was in 1900? 76,000,000. In 1890 the population was 60,000,000; in 1880, 59,000,000, a hundred years ago, in 1830, it was 13,000,000, Great Britain and Ireland and the United Kingdom had 15,000,000, and France had 31,000,000. France, you see, seized the place which she occupies in the world still in terms of the 31,000,000 people she had then relative to the 15,000,000 in Great Britain and Ireland and the United Kingdom. It is quite natural that it should be so - she was the first nation of Western Europe to develop a certain highly

civilized culture, and other nations came there to study and learn it. However, what I wish to say is that we have 75,000,000 people today and will have, I suppose, by 1940 about 135,000,000. If you subtract 75,000,000 from 135,000,000, the balance is 60,000,000, isn't it? Now in this country since 1900 we have provided the homes, roads, factories in which to work, schools in which to be educated, city streets, city lighting, hotels, etc., that it takes to supply 60,000,000 additional population in forty years. That is what Russia has got to do in the next forty years. It takes four Russians to do as much work as one American, which is literally the truth; that is no joke at the present moment. Of course it will not continue to be that, in time it will take only three Russians to do as much as one American, and then perhaps only two, but they will be mighty lucky if in forty years they get to the point where two Russians will do as much as one person in the United States. It is going to take a long stretch of training to get the Russians to that point, and it is going to keep her mighty busy. Russia is by no means as efficient today man for man as we were in 1900. I do not think she could do what we could in forty years. That is why I say you will be thinking about this pattern, and always and forever that must be the most important comparison among these nations.

Now there are some exceptions, there are nations that have done this on a somewhat different basis. The outstanding case of a nation that never pretended to feed itself at all and yet grew in wealth amazingly was which one? England. Surely that was the

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outstanding case. She was the nation that initiated what we call "the industrial revolution"; that is, she learned how to use the power that presided particularly in the coal and somewhat in the waterfall, employing it in manufacture and in transportation. Of course, unless you employ that power in transportation it will not help you much in manufacturing because you would not have the breadth of markets. However, since that time that has been one of the great tricks the world has discovered It does not look like a very big trick now. Every school boy knows it, doesn't he? That is the way with all of us - what we today hold as fundamental truths even in the scientific field will be to the school boy of the next generation and the generations afterward merely a ridiculous fallacy that anybody ought to be able to see through. That is the kind of world it is.

I have worked a great deal in the field of production because I am interested in production and the course of production. That is the secret of economic power. However, that does not mean I study nothing else. I am a value theorist - you cannot understand half the words I say and the other half do not mean anything unless you know the first half. That is the way I make my living. I am not like the troubadours of old who sang for the pleasure of singing, but in valuation I am a real expert. I just finished a tax case for the Government. I work for them sometimes, too, but most of the time I work for the tax payer - he pays better for one thing. I am devoted to research and banking and credit. I am, in that field, the Chairman of the Social Science Research Committee on Banking and Credit.

We have two pieces of research going now and are organizing another. So, it isn't that I am an engineer, although they are good men.

In economics, as in production, you have to ask about every one of these institutions - what effect it will have upon production, and you will watch, as I say, these nations as they shift, and ask yourself which of these nations are going to grow in the future. If you will go over the figures, as I have, for the United States and follow them through from 1860 or 70, you will find that the output of manufactured goods measured in physical quantities does not vary with the number of people working in manufactures. The number of people working in manufactures in 1930 was no greater than the number that worked in manufactures in 1920, but the output was forty per cent greater. I will tell you what it does vary with, it varies exactly with the amount of energy they use. Take the amount of power that is available in manufacturing use, and the index of industrial production just follows right along with that. In all this business of invention, an increase in efficiency is simply devising a machine which enables the men to use four horsepower right along and convert the oil into production where before he used only three or two one-half horsepower. That is what the whole business is about. England found that instead of grubbing your way with manufactures you better go to work and develop your skill in that field, and she, of course, was a strict monopolist in the whole matter, as you all know, being men skilled in technique. Even as late as 1810 when Robert Fulton built his first steamboat, he had to get a license to

export steam engines out of England. You could not export steam engines out of England, not by a jug full. They were skilled in that production and they would not export the engines out for men to copy as we do today. (Is there a naval man here who is willing to confess the perfidy?) All of these machines they kept to themselves, and they grew wealthy. For one hundred and fifty years they outran all the nations in the world in their growth of wealth because they had learned these arts of the industrial revolution and were developing them rapidly. Just as long as England led the world in that development, just that long England was the leading nation of the world on the side of finance and economics and capital accumulation, and then she no longer led the world after 1810 - possibly before that Germany had caught up with and surpassed her - and from that day on England fell behind and she remained behind as an economic nation. However, in the matter of manufacture she had fixed it so others could not copy her, and she could trade her manufactured products for food. I have not put England on the list because she is an exception. She does not fit into this pattern, or did not in the past, because she did not pretend to raise her own food - she obtained it mostly by trading. England today with thirty per cent of her labor, not more than thirty-five per cent, gets the food she needs by trading manufactured products for it, because she gets the benefit of her efficiency in manufacturing.

What can we expect of Japan in the matter of food production, even though she has Manchukuo? Japan is trying to get more abundant

food production with a very small increase in the number of her people that produce food.

I am not saying that farmers are the foundation of all our economic progress. The farmers do not do it themselves entirely or even to great extent, the research people over here in the Department of Agriculture are of great assistance. Let me say in passing that our own Department of Agriculture is an institution that challenges comparison the world over and without any possibility at all of successful challenge. That organization is a marvel, in many ways, of our civilization. I used to hear a great deal about the efficiency of Germany and the research done in Germany, then I went over there a dozen years ago and learned that our own Department of Agriculture does more research than all the rest of the countries in the world put together. They are a marvelous organization. Of course, in such a country as England where you have a very efficient service standards prevail, as they do in the Army and Navy - the men must be trained men or they are a nuisance entirely. And those are the people, I suppose, really that are at the bottom of this very great efficiency of ours in the field of agriculture.

With a country such as the United States, if the thing is involved at all and there is need to expend a lot of money for public purpose, say for national defense, it is perfectly obvious that our capacities are tremendous as against all these other countries.

This difference in the number of people that are freed for other work in the industrial and professional fields as your efficiency

in food production increases is not the only difference between these nations. Those figures call for another piece of interpretation that is quite as important as that first, and that first is very important.

I do not know what the percentage of China would be. Probably ninety or ninety-two per cent of her population is engaged in food production. There is obviously a very great difference in the efficiency of the farmers, isn't there? These 22 families on the land feed a hundred families, these 45 feed a hundred, these 38 feed a hundred, and these 65 feed a hundred, etc. The output of those groups is the same, but not the output per person. It is perfectly clear that one American farmer must produce three times as much as one Italian farmer, isn't it? Three times 22 is 66 - it takes 66 Italian people to feed the same number of persons, a hundred, that 22 American farmers feed. Russia has somewhere around eighty per cent of her population on farms and the United States undoubtedly has about twenty per cent. That means that an American farmer will raise as much food as how many Russians? Four. So it is perfectly clear that the American farmer is four times as efficient as the Russian, three times as efficient as the Italian; twice as efficient as the Frenchman, and one and three-fourths times as efficient as the German. I do not mean he works harder - he doesn't. He does not work as many hours as they do but he works with better method, better machinery, and more of it, and of course more power, animal power when he is using horses or mules and tractors when he is using mechanical power. He

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uses decidedly better plants as a rule. Our plant breeding departments here have been very active. In the field of dairying (milk and butter) he uses much more efficient cows than the French or the Germans or any of these nations, with the possible exception of Switzerland and a small hand full in Holland and Denmark that may be as efficient as ours. Whenever Europe wants to learn how to improve her method in agriculture she comes to the United States. That is the story - we are many times as efficient.

In my own studies of these other countries - Germany and France (I was there six different times and spent a third of my time from 1925 to 1930 there) I became greatly interested in this question of relative efficiency.

It must be as obvious as the nose on a man's face that the hope for peace in the world and the hope for peace in this country depends upon understanding between the English-speaking nations. I do not suppose anybody in this country of any intelligence doubts that any more - however, we do have just enough Irishmen among us who still feel that the English have to be watched, but the Irish are allowed to be Irish of course.

Let's talk about England for a minute on this matter of efficiency outside of agriculture. I have friends that have manufactured electrical devices, switches, automatic telephones, etc., in Liverpool for a great many years now, for seventeen years at least, and they pay just half the wages per hour in Liverpool that we pay in Chicago. We pay eighty cents an hour in Chicago and in Liverpool

they pay forty cents an hour, or the equivalent. Of course they buy the raw materials (copper and others) upon the markets of the world. When their product is finished, despite the fact that they pay just half the wage there that we pay here, the cost is just a little higher in Liverpool than it is in Chicago. When they first ran up against that fact they were astounded. Some of their men are very able. The executive head of the company over here is one of the very ablest men that I have ever known without any exception whatever. He went over there himself; lived and worked there for nine years, from 1920 to 1929, and they improved the efficiency of the factory some, but it is practically impossible to get it up to our standard.

In Germany you will find that it takes, roughly speaking, two men to turn out what one man will turn out in a factory here. There may be some particular line in chemistry, etc., where that would not be true, but by and large that is what it comes to. In 1924 the Dawes plan went into effect - you remember that. Germany thought that now she was fixed for a great development. She was paying at that time forty marks a week (ten dollars) in wages; we here in our automobile factories were paying somewhere around twenty-five dollars a week. Labor was highly skilled; she was able to get credit over here so she could buy raw materials: rubber and copper and the alloys, etc.; many of these things she manufactured herself, and it seemed to the Germans pretty clear (they were paying ten dollars a week and we were paying twenty-five dollars) that she could beat us out in the markets of the world. We felt so, too, and complained about it.

Imagine her surprise when she found that at ten dollars a week labor she could not build an automobile as cheaply as we could at twenty-five dollars a week labor, and one manufacturer there said: "Your automobiles not only are cheaper than ours but they are so much better." The second part of that is understandable on the ground that we turn out great quantities and can spend enormous amounts of money on precision instruments, etc. That is a fact; there is no argument about it.

I remember one day in 1930 I was going through the Otis Elevator Factory in Berlin with the American who is in charge of all the European factories. They have a plant in Berlin and one in Paris. It was a beautiful factory, beautiful work, orderly workmen, the aisles orderly, everything prim, as it always is in the German factory. As we came out, he said: "I wish we could step right through here into the French factory in Paris and you could see the difference in the temperament of the two." I asked him what he meant and he said: "Well, for example, the quality of the work, the orderliness with which it goes on, the state in which the aisles are kept, etc." He said that the Germans are much more satisfactory than the French. I said: "Why do you manufacture in France then?" "Well," he said, "manufacture is just as cheap there as here - wages are so much lower." That is news to most people in America. Probably it is not news to you people, you know that field, but nine out of fourteen Americans would be greatly surprised to learn that German wages are higher than French wages. German real wages were in those days of liberalism over there highest

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of any country in Europe. The Frenchman is not as efficient a workman - it takes two and one-half Frenchmen to do what one American does. In the coal mines it takes three Italians and four Russians to turn out the same product exactly as one American turns out at the present moment. You see, the difference is the great number of people available for industry to make all the things you need for defense. Of course, there are some people in this figure who are not working, older people who have retired and younger people who are in school. We have more of those than other countries have because our people go to work later and retire earlier as workmen. Also, there is not only that difference but if you take whatever people there are in industry (these (indicating figure on blackboard) are not all in industry, you understand, a great many of them are in distribution and a great many, of course, are in the professional fields) the ratios will be much in that order, and if you multiply this one by a hundred; this very next one won't be over forty or forty-five, this sixty-two you would multiply by fifty, this one by thirty, this next one by twenty-five, and this one perhaps by thirty, or whatever it is in Japan. It is in that way, as I see it, that you can best attack this problem of comparing the economic efficiency, and the economic power of the different nations.

In closing, I want to say just a word concerning a phase that you will be wondering about and probably want to bring up in the question hour: A great many of you think I am running down these other countries unduly - I do not mean to run them down at all. I could stand here and lecture the rest of the day about the excellencies of

the cultures of these various countries and what they have contributed, and we in the United States do not forget for one moment that we stand in the straight line of inheritance of European culture. Our industrial revolution, our whole industrial structure, is the logical development to its full so far of the English and the British industrial revolution; other things in agriculture we got from Germany and still other things from France. I am not passing upon the relative excellencies of the cultures of these countries, I am not saying even that this particular system we have here where we lay as much stress as we do on economics is the best one, we may have gone too far, but we are not discussing that this morning. You may say: "Well, after all, it was easy for us to do it because our greater efficiency depends upon our greater natural resources." It does not, except in small part. Perhaps we might be twenty per cent more efficient than they are on account of the natural resources. They can all buy natural resources just as easily as we can; the raw materials are not the things that, usually speaking, are high. Furthermore, in the United States of America we were not always at the point where we fed ourselves with twenty-two per cent of the labor of the people. In 1880, or the year in which I was born, 1876, half of our people were on the land engaged in feeding us and raising cotton for us, and we were not as well fed as we are today, we did not have as great a diversity. From 1880 on to this day we have come from the point where there were fifty people here and fifty there (indicating percentages on blackboard) to the point where there are twenty here and eighty there, so you see there is a great deal

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more to it than just the natural resources. Of course, there was an advantage in natural resources in this country and a great advantage in agriculture. Our agriculture was always much more efficient than the British. My grandfather had twelve acres of land in 1846, he came over here and bought eighty acres out in Michigan. Obviously, you could scarcely afford to keep one horse on twelve acres unless you could work for your neighbors because you could not afford to devote the product of that land to keep the horses, the human beings had to have the food. But, you could have two or four horses on eighty acres - plenty of land to feed the population and leave food over for the work animals. So every farmer had at his assistance not only his own muscular effort but that of one or two or four horses on eighty acres. That was, of course, an advantage. But even with all that, by 1880 they had only gotten up to the point where half of the people could feed the population. From that time until the present we have gotten to where something like twenty per cent of the people can feed the population. It is rather in the progress of technological change that we have had over here, and, of course, Germany is ahead of Italy for the same reason. Germany has somewhat better natural resources - yet not as good as France and Germany is ahead of France in technical efficiency. Russia certainly has an abundance of resources but has no competence on the technical side. She hasn't the machines or the energy with which to drive them, and she has not the labor with which to operate the machines if she did have them. In forty years the Russians will probably build up, train,

and educate a mechanical-minded population That is what we have done here, and there, I think, is the secret of our success.

As long as Britain led the world in invention, in improvement and power of machinery, she grew rich faster than anybody else. I think one of the most curious phenomenons of history is this one. The industrial revolution in England started about 1750 -'40 to '50 and '60 - and that made England rich, as I see it. At the same time exactly England greatly expanded her empire Remember that in school history you learned about the French and Indian war? As I remember it, that came to a close, was settled by treaty in 1763, and as a result of that treaty England got Canada. England also got control of territory in India. India is a very large part of this great body of the British Empire. The dramatic part that we learned in school is that the sun never sets on the British Empire This great expanse of colonies happened just about the same time she got this trick of industrial method. I have argued myself hoarse with the Germans (I speak German fluently - I learned it here in the community and also went to the University to study German as well as economics) about their need for colonies, that they have to have raw materials - good Lord, with all the raw material countries in the world and every raw material producer of lumber and coal and oil, etc. saying he is losing money, you can buy it! I know of only one argument that ever got under their hide and this one really did I got sad when they began talking, shook my head and said: "Here I am from America, first of our family, eighty years since we went away, and what do I find? I

find the Germans simply aping England." That makes a German mad quicker than anything else. They imagine England did it by colonies so they have got to have colonies. I will make you an assertion here this morning: I do not believe that the whole British Colonial Empire in the last thirty years has been worth one cent to Great Britain. I wish somebody would make a study of that. I am willing to meet all comers and defend that assertion. It is a great illusion. I can give you just one fact. How many white men are there in the British Empire? Seventy million stretches it until it cracks. If you talk to an Englishman he will tell you that. There are forty-five million in Great Britain and Ireland; eleven million in Canada; Australia has about six million; in South Africa and that crowd you might collect another two or three million - total sixty-five million, and that is all there are. What do all the rest of those people produce? Enough for a bare subsistence. If you put them down on this list their percentage would be approximately ninety, their efficiency would be one-sixth or one-seventh what ours is. They add nothing to the wealth of the nation. The accident of the colonial empire being expanded at the same time the industrial revolution came, I think has done more to confuse the minds of the world than almost anything else. It is a good confusion to get rid of.

The situation today is simply this. The place which Britain once occupied as having the leadership in finding new ways to do things, finding new ways to increase production, finding ways to make an hour's work turn out twice as much product and less arduously, that place of

leadership passed to the United States some time around the turn of this century We have it now and the rest of the nations of the world are patterning after us - even England in some measure, Germany in considerable measure all during the '20's, and Russia perfectly open and without any question at all.

I hope that you men will take the suggestion of this method for whatever it may be worth and will use it, because it is one of the most interesting phases of economic study and analysis that I have run on to in the course of some thirty years of professional life in the field of economics. Thank you.

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Q. I would like to ask two questions. One is. When will the transfer from the land to industry stop in the United States, if any prediction is possible? What is the limit to that balance?

A Of course nobody knows We cannot go so terribly much further - the figure is twenty per cent now For the moment I think we are face to face with some shift toward the land, not perhaps so much for actual farming as for living. If you are one of these people who are frightened about inflation, perhaps you will buy yourself a place twelve or fifteen miles out from town. All the land around Washington will double in twelve or fifteen years, around all cities. With the automobile and the new means of transportation it has become

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possible to live on the land with much more comfort I think we will see immediately ahead of us some slackening in that shift, but how far it will go in agriculture no one knows, perhaps to fifteen or twelve per cent.

Q. The other question is this: As this seventy-eight per cent grows larger, what will be the final effect as our civilization gets more complicated? I am thinking now of such problems as labor and the thirty-five hour week. What will the workman do with the rest of his time? The theorists have given him baseball fields, etc., but what will he do with all that spare time and what will be the effect of those conditions in possibly throwing people back to the land?

A. I hope he uses some of the time to think a little - that will help some.

Q. That is a hope, of course.

A. I think it may be more than a vain hope. I think we are coming to the margin. You see, we have no more people on land today than we had in 1900, some thirty-two million, in spite of the fact that we have added sixty million people to the population. In this matter of shortening the week to thirty hours, that was talked about up to the time that this bill, which will be sent up today, came up. What do you have there that the laborer has to face? He does not know it but he is now having his eyes kept on the thirty hours a week rather than on the real thing he wants, and that is an increased

standard of living and more goods. There are eight or nine million people working in factories and some thirteen million working in the mechanical industry - some person came along, looked this thing over, and said: "How many of these fellows belong to the union?"

"A million and a half."

"What? Do you mean these other ten million nobody is collecting anything off from them for dues?"

Now that is a perfectly legitimate occupation, but not many of us can be in it. Leaving aside that pleasantry, let me come back to the economist again. You know I was thinking of that thing this morning. I oftentimes think of it. I have occasionally done a piece of research for industry, and I enjoy it. The reason I am not in it is because I do not like to put my feet under a desk every morning, especially another man's desk. I would much rather be a free lance as long as I can make a living. Take the automobile industry - if they get their wages up, as they probably will, to thirty-six dollars a week, that will be a high wage, have to have ninety cents an hour and a forty hour week at that practically, which means eighteen hundred dollars a year, and we talk about how high that is. It is one of the highest wage scales paid. If you work fifty weeks a year, thirty-six hours, you make eighteen hundred dollars. Then just ask yourself how in the world people live on eighteen hundred and raise a family of four children and educate them, too? I just do not see how they do it any more. That does not mean I have never lived on eighteen hundred dollars a year. I have. I started to teach at nine hundred a year in the

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University, and I had a wife and children. Before that I was on the farm, and through the depression of the '90's I taught school at twenty-five dollars a month - that was eight hundred dollars a year. However, the workman may want more goods at home, a better house, a refrigerator, and everybody drives a car nowadays, even if he is on relief.

A colored man the other day who had been sentenced to prison appealed to the court; said his family, he thought, needed him. He had a family, wife and four children. The judge asked him what job he had. He was on relief. "You were arrested while being intoxicated for driving whose car?"

"Mine."

"How long have you been on relief?"

"Two years."

Then the judge said: "I do not think your family would miss you much." It is ridiculous. You could write a book and you would not tell as much about a civilization as that tells. You can only do it, of course, by these figures right here (indicating tabulation on blackboard). Every nation might have a great many employed.

At any rate, somewhere in here the laborer is going to make his choice formally and consciously as to whether he wants more leisure or more things, and believe me his family will help him make it, too, there is no question about that. This is the problem. It was no problem when the day was twelve hours and the week was seventy hours and it was not a problem when it was sixty hours, but when you get down to forty hours, or under, I suppose that somewhere in there must

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come the line, and from then on I should guess that increased efficiency will mean an increase in the volume of goods they enjoy. It is a question when they are going to see that thing clearly, but when they do see it clearly they will not want to shorten their hours any more but they will want more things, and they will get them. The difficulty that lies in the way today is that prices tend to rise, although I think that is much over done. After all, from '23 to '29 there was no rise in commodity prices. Commodity prices in '29 were a good deal lower than in '23 or '25 and were on the way down then. However, we will probably get increased wages and stable prices for the same number of hours and that is what I think the great mass of laborers want. At present we are caught in a great social, political movement, and we will have to run through that before we see what happens.

Q. The production of the prime necessities of life has increased in efficiency, thus releasing more men to do things for the producers - build tractors for him, build roads for him, etc. In the United States twenty-two per cent of the people are engaged in farming - is the prosperity of the nation dependent upon the farms?

A. Dependent upon the efficiency of the farm. At one time I was the President of the oldest agricultural college in the United States. They have a good football team, too, now. I had an army of my own when I was out there, so to speak. However, now that you have brought the thought up, (I never have been in politics and never will be, I hope) it seems to me that the people in politics do an awfully poor job making an argument for doing something for the

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farmer. Our farmers are the most efficient farmers on the face of the earth. Of course, the Canadians are just as good as we are in efficiency, and I suppose the Australians are, aren't they? - they must be very efficient farmers - and the New Zealanders, but aside from those our farmers are far ahead of the rest of the world. If I were going to try to get five or six hundred million dollars out of Congress to do something for the farmer with I would not go into this price parity business, which you cannot prove anyway. What they forget is that, as you say, the efficiency of our farmers makes possible this other. That is the way to put it - it isn't their prosperity. Having shown that they are as efficient as they are, good Lord! they certainly have the right to be prosperous, haven't they? If you do not reward efficiency in the country, then the whole theory of our industry and government falls apart, doesn't it? That efficiency should be rewarded, and what I would say is this: "Why, gentlemen, take the figures for 1900. Divide seventy-five million into thirty million and you have forty per cent of the people on the farms in the United States of America in 1900. If the same percentage of the population lived on the farms today as lived there in 1900, thirty-seven years ago, there would be seventeen million workers on the farms instead of ten or eleven - six to seven million people have been freed for that seventy-eight per cent group. Where are they? In the automobile industry - producing the raw materials, building the automobiles, building the roads, producing the gasoline and the oil, running the garages and the service stations, etc. The entire automobile industry

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is completely produced and manned by the people that agriculture has freed by its increasing efficiency. The automobile industry is one of the dividends of progress. It does not cost us one hour of additional work. We work fewer hours, off and on the farm, than we did in 1900. With all the service it renders, that is the dividend of progress. What does it amount to? Ninety billion dollars, or something like that. That is what we spend on automobile transportation in this country - roads, maintenance, and everything. I am asking for six cents on the dollar of what we farmers have given to the rest of you. Are we going to get it, or aren't we going to get it? If anybody here registers the six cents, for God's sake let him stand up and say so!" There is just no answer at all. What right has the farmer to have it? Well, you can have a lot of arguments. This is the fundamental one that you would use. If you want to go into politics you are perfectly free to have all this. From the improvement in our modern industrial society, electricity and a lot of these things are particularly to the benefit of the people in the towns, they can get at them cheaply. It costs a lot of money to build a line to take electricity two miles out - expensive business rendering electric service to the farmer, telephone service also, if you give him the single line service the towns have. Not a fourth of the farms in the United States (I do not think twenty per cent of them) are actually located on hard surfaced roads, and education has been woefully deficient until recently, is still deficient enough. The farmer is not close enough to get things to him easily; the farmers

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live scattered. All you want is six per cent of what has been produced by the people that the farmer has freed to do these things for him. What those economists were doing who were advising Landon last fall I do not know. They were a bunch of fellows who fell short of their opportunity, to put it mildly. There is the line of argument. That is sound, and that is what you have in mind, I think. I am sure you understand the picture.

Q. I want to ask you if the extent of our territory as well as the fertility of the soil does not have a good deal to do with those figures as compared with the other countries? We had so much more land to start with and fertility besides, that one man could produce so much more and he improved it.

A. But nevertheless it took fifty per cent of the population to feed us no longer ago than the year I was born. You would still have that to explain. We always did have an advantage. My grandfather could have eighty acres here and only twelve in Germany. Oh yes, it has had some effect, especially in the stimulus of interest in labor-saving machinery. We had enough land so that we could afford to feed the horses, mules, and oxen, and augment the muscular power of the farmer with the power of these animals. Have any of you ever gone through Italy in the spring? I went through Florence, through Venice, and then over to Milan in February of 1926, and there I saw men, seven or eight of them all in a row, spading in the field, as your grandfather spaded the garden. An abundance of land enables you to get rid of that right away because you can raise enough for all

the people and the horses in addition and so you augment the muscular power of the farmer, which is the motive power.

Q. My understanding is that about ten years ago the population in Japan was around two thousand per square mile; that it is somewhat over six hundred per square mile now - it has been reduced. In Germany and Italy it is somewhat over four hundred per square mile. Will imperialistic expansion, territorial expansion, of the countries have much bearing on the proportional relationship you have there on the board?

A. I do not know what bearing it will have in Japan. I do not know how successful they will be in their new territory. I doubt very much whether there is very much territory that is worth expanding into for most of us. Where is Germany or Italy going to expand to? Of course if you could get into Brazil - but Brazil is now a nation with its own ideals. My opinion is that a country would want to get as much territory as possible in South America because in years to come I believe that will be one of the principal continents that will furnish raw materials to the European nations. But that isn't the only thing - it is the difference in method largely. Undoubtedly they will copy our method in Russia, and in the course of another sixty or seventy years they will be where we are now. However, by that time we will have moved on, we do not stand still. If you had an abundance of good fertile land that could be tapped, it would make a difference, of course. Probably the great difference

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will come from the application of new types of fertilizer to the land. I don't know whether or not you have read Huxley's (the Biologist) works. When you hear those fellows talk as to what we might do with new types of fertilizer and bacteriology with the land, it sounds as though we do not need half the land we now have.

Q. As I take it, you discounted a great deal our natural resources and accounted for this tremendous increase in our power through technical developments. I wonder how you would account for that? In other words, we breathe the same air that people in other temperate climes breathe - have we imported from Europe the best brains? are we now creating through our technical schools better brains than Europe is producing? It takes brains, as I see it, to produce efficiency. How would you account for this apparent greater efficiency that we have than such a nation as Germany has today?

A. That is a real problem, a difficult one. I have some German friends who have been over here and studied from time to time, and one of them said a thing one day that I thought had some life in it: "Well, for one thing, you have never had a feudal system". I have talked with American manufacturers of precision instruments - the Germans get out very good ones. I asked one manufacturer why he did not manufacture over there, and he said: "Well, it is more than wages. There is a good deal in the psychology of the laborer." The German workman will not get out the product for some reason or other. An American will make up his mind as to where he is going to set it and

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go ahead - he will make a mistake now and then - but the Germans will not do that. They fuss and fuss over that thing, which goes back to the feudal system business. The employer is to the German worker much more of an overlord. Of course, that does not explain it all. Those go for accident. Why did England, for example, stumble onto the industrial revolution, the application of power to the problems of production? I do not know why they did but they did, and we must not forget for a moment that what we are doing over here is all in the straight line of continuation of what the English did. If you want to flatter an Englishman, say to him what I said to one once, who was from the Financial News Editorial Staff "Well, your English salvation is probably stubbornness. You do not pattern after somebody else." The German and Jap does that to ridiculous lengths. Concerning the ship they copied, the Scotch shifted the sense of gravity, and how many tons of cement did they have to put in to keep it straight up at all? The British do not do that, the British are much more suspicious. I said. I am wondering if you people in Britain aren't going to be able to hold out and watch this thing critically long enough so that in your next advance you will jump over this advance? We are probably only at a stage in the advance - people have thought at various times back for a hundred years that they were on the culmination of it. The British may jump right over it and feed themselves off the British Isles. That is a speculation, I do not know. I was a university professor for a great many years and if I got to talking about it at all I would completely

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overestimate the facts of teaching. I would say this much was true, however - that we did not import the brains from Britain. The people who came away from Europe, as my grandparents did, had some initiative, that is sure, and when they got over here they were "on their own". Of course, they had, as the Colonel has said, an immense wealth of natural resources to be exploited, and it was for a good while almost every man's opportunity by just going into it, and for people with a lot of initiative it meant progress. We may not always lead. One of these countries may jump over this stage of advance.

Q. One thing that has puzzled me quite a little bit is that we have, strictly speaking, engineering and ingenuity in this country which has invented and is constantly creating new machines, and there is a willingness to scrap the old machine and use the new machine, mostly a single purpose machine, which has carried us forward by leaps and bounds and made a gigantic structure of mass production in this country. There is nothing like it anywhere else in the world, nothing that even approaches it, and the psychological effect of it all on the man has been to tell him that at forty he is passing out of the picture. I wonder what thought the economist has given to the effect being told you are old at forty or forty-five is going to have? Is it going to slow the process, or are we going to take care of them in some other way? Is that a fair question sir?

A. I do not believe we have told them they are old at forty or forty-five, and I have not been able to find the proof at all that in industry the men are discarded at forty. It isn't true in the

automobile industry. Speaking of the Henderson Report, I went over that carefully and studied it, and that is not true. I am no man to ask that question because I am sixty, you know - some past forty-five. Undoubtedly a nation as well-to-do as ours will see from here on an increasing number of people going into retirement at an earlier age. The thing that spoiled it for a great many of us was the depression. If we get one of these major depressions every six or seven years it spoils our plans, just as the war spoiled it for a great many Frenchmen. The war gave great rejuvenation to the Frenchmen, put a lot of them to work - men who were spending the family income like gentlemen had to go into industry. I think that it is not undesirable that the people should retire perhaps earlier than we have thought, but I do not think the American psychology tells a man he is old at forty or forty-five. Most men who are forty to forty-five, who are on the executive side, are going pretty good, just getting started - they are not vice-presidents or chairmen of the board yet, the great mass of them.

Q. I saw that in Massachusetts they are passing a statute to require industry to absorb the overload that they turn loose. There seems to be an enormous number of men particularly when they reach fifty years of age that can no longer stand the line in mass production industry and it has really created a hazard. Is the psychological effect going to retard progress?

A. Yes, and no doubt of it. England is an example of that. The superintendent of the company, about which I told you, that

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manufactures telephones and other electrical apparatus, told me that they had this experience. They have a machine for winding armatures, and they use the British machine even in their American factories because they like it better. They equip it, I believe, with ball-bearings, bring it into the factory at Chicago, and the people there normally run it at seven thousand to seventy-five hundred revolutions per minute. They have not been able to get the British factory up to thirty-five hundred as yet. It is just nonsense to say they could do it. The superintendent of the company asked an employee, he was thirty-eight or forty years of age, if he could run the machine five or six thousand revolutions per minute. He said. "I could run it five thousand or six thousand, yes, I could now, but I am not sure that I would be able to do it at sixty or sixty-five - there are a good many men here of that age and if I ran it that fast they would be run out." Many industries, as far as I have seen, are a great deal concerned with keeping their old men. It is a real problem with them and they apply their minds to it much more than you would imagine. Executives are applying their minds more to these employee problems, and I think it has come about with good effect. Of course the ideal thing is that probably a great many of the people in the factories will have other things they want to do after they are fifty or fifty-five. After all, the French piece of advice is still good - "The thing to do is to cultivate a garden". In the figurative sense, that is what you can do.

Q. Although you did not touch on it directly, I would like

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to ask what you think the effect of the large gold reserve we have is and what would be the effect of the sudden withdrawal of the so-called "hot" money, that is, the so-called foreign investments?

A. I will answer the second question first. There is not enough of that to amount to much of anything. We could send it out very quickly. You see, we have eleven billion, nine hundred million dollars of gold. (We had that amount last Friday - it is published every Friday morning.) I dare say that nine hundred million of that would take care of all the "hot" money, and if gold is worth less to us, as people are saying, it ought not to worry us to lose even a billion, nine hundred million. The amount of gold in the world now is a figure that a hundred years ago was not envisaged at all as within the realms of possibility. Up to 1848 the average gold production had been less than fifteen million dollars a year in the whole world. It ran up to seventy-five million in 1915, of the old dollars, and we are now at a billion, two hundred million and are still going up. You see, there is a lot of gold, so the "hot" money would not worry me at all. Concerning your first question as to the great supply of gold - that is of no effect whatever because we have immunized it, so to speak, or sterilized it, as they say in the papers. They just doubled the requirements of the reserves that the banks have to keep - they have sterilized it in that way. The fact that we are getting it, which again some people think must be a scheme that somebody is putting over on us, is an evidence of nothing at all except the financial soundness of America as compared with all the

rest of the world. We are getting it because people want their money here and not elsewhere, insofar as it is what they call "hot" money, money sent here for investment. Ever since the World War there has been a great flight of capital, removing it from this country where there was danger of revolution, etc. to other countries. Switzerland has had a lot of it, Holland, France; and Britain has had enormous quantities of it. We are the people now to whom people are sending capital. Nine months ago I sent a friend of mine, who was going to Europe, to Switzerland to see one of the bankers and ask him what about the whole outlook there. He was the only man I knew who got this thing right in 1930. He sent back word that what was happening in Europe, and especially on the part of the Swiss bankers, was that they were not putting any money into any European country nor leaving any money in any European country that they could take out, with the exception of some in England. There were only two countries to which they had been sending money for some months previous to that - one was South Africa and one was the United States, they were putting no more money into South Africa for the reason that if England got into war, as they thought last September, there would be a black revolution down in Rodesia and they did not want money in South Africa, so all the money that is being invested by them (and they have to invest it outside, you cannot invest much in Switzerland) is being invested in the United States and will be thus invested for the next two years, in his opinion, and he is by far the shrewdest man I know.

Of course, we did not get all this gold by way of capital

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imports since '31, a good bit of it has come over to pay for goods. People have produced gold to send here and have taken goods for it - cotton and wheat, etc. The talk about gold becoming worthless; other nations getting along without a gold standard, I do not believe. You could have a standard if it were managed by perfect men, but standards are managed by parliaments, by people like our Congress up here. Go up there, listen to them, and see what they think about money, and if you think you can let them manage it; at the same time having the right to print money and not have to dig it out of the ground. I think the world will go back to gold and we will be recognized for what we are (and here is the secret of it) - the richest nation on the face of the earth. If any one is going to hold twelve or fifteen billions of dollars worth of gold which is sterile, does not reproduce itself, we are the only nation that can afford to do it, surely.

Colonel Jordan Why should we pay thirty-five dollars for it when we can get it outside for twenty-six or twenty-seven dollars in the world market?

A. We can not.

Colonel Jordan: We can get it for less than we are paying for it.

A. No, we can not. The British, you see, Colonel Jordan, are on the same standard practically. What happened was that we reduced the amount of gold. First Britain went off the gold standard and she has not gone back. With the thing stabilized we put a price upon gold in terms of about what it is now, and then we, in January

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1934, having then gotten the pound and the dollar into about the old four dollars and eighty-six cents or five dollar relationship, five dollars to a pound, stabilized gold so as not to disturb the relationship, so it brings the same price in Britain as it does here exactly.

Colonel Jordan My understanding was that when the President set thirty-five dollars for gold that it could be bought outside for about twenty-six or twenty-seven dollars. Of course that would bring the gold to this country.

A. Not in dollars - it could not, because in countries outside we paid for it in the money of those countries. What the President said and what they did is this Twenty-five and eight-tenths grains of gold made a gold dollar in the old days. That meant if you had an ounce of gold, four hundred and eighty grains, you could take it to the mint or to the Treasury and they would give you nineteen or twenty dollars, whatever the amount was, for it. In pure gold that would be divided by 23.22. If you divide the number of grains to make a dollar into the number of grains, that gives you twenty dollars and sixty-eight cents. The President said. "Hereafter 15.21 grains of gold shall be coined into a dollar." Divide that into four hundred and eighty and you get thirty-five dollars. However, today we do not allow an individual man to take an ounce of gold to the mint and get it coined. The Government will buy it and have it coined; the Government does take the gold and issue against it a gold certificate, which can be circulated. You and I cannot own it - we will be put in jail. You can

guess what I think about that performance. At any rate, they give it to the only people who have a right to hold it - the Federal Reserve banks, and the Federal Reserve has the account for it and gives me a check for thirty-five dollars. The Government coins that thirty-five dollars any time it wants to and it can issue a certificate against it. We have reduced the standard to thirty-five dollars - the newspaper men discussed it in unfortunate terms.

Q. I have just one question. I have read a good deal of the analysis of the international difficulties running along the line of reasoning that it is "the haves" versus "the have nots". If my analysis is correct, you do not believe that? - the "have nots" being Japan and Germany. By your analysis, you believe that this "have not" theory is absolutely fallacious?

A. I think it is true that that is what the row is about. I think that Italy would like some fertile land. One of the difficulties under which Italy labors is that she does not have an abundance of good land - that is one of her weaknesses. She would like a lot of good land - South Africa or some part of Romania. Suppose Italy had Romania, she would do wonderfully well. That is a great country although the people are not so much in the way of efficiency. Italy would like to have Romania and she would be a good deal better off if she had any such fertile land; they would do a good deal better than they are doing now. I do not mean to say all this business is due to our greater efficiency, something like twenty per cent of it might be ascribed to that but not much more than that. A very able business

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man in Germany wrote a book called "The American Industrial System". He is with an electrical manufacturing firm in Europe. They have always talked about natural resources being the secret of large production and even economic power. He came over here, and he made up his mind that not over twenty per cent of the difference of efficiency between this country and Germany is to be ascribed to our natural resources. With a country like Italy it is more than that because Italy has not very much land and most of it is not very good. Some of it is very good, as you know the Po Valley is not excelled by any land anywhere in fertility, but by and large Italy has poor mineral facilities. They want land, but it is a great illusion that they have in their minds as to how much benefit they will obtain from it - I think a very great illusion. To that extent you interpreted me correctly.

Colonel Jordan Doctor, I want to express our appreciation for your talk. We look forward to having you every year, and I think you do more to help straighten the class out than any one we have come here. Thank you very much, sir.