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THE DETERMINATION OF TOTAL REQUIREMENTS
7 February 1946.

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THE DETERMINATION OF TOTAL REQUIREMENTS 7 FEBRUARY 1946.

GENERAL ARMSTRONG:

Gentlemen, we are particularly fortunate, I can assure you, in having Mr. Batt here, first of all because among the civilians of the United States who understand the problems of industrial mobilization Mr. Batt has few peers. He will tell you that he has been bridesmaid many times but never the bride. But he ended up as Vice Chairman of the War Production Board. He was instrumental in organizing and starting on their way three successive agencies that controlled the American economy during the Second World War. He has had other distinguished assignments. But, in order to take up a minimum of time in presenting him I merely add that he is an expert on the subject on which he is going to speak to us this morning--The Determination of Total Requirements. Gentlemen, Mr. Batt.

MR. BATT:

General Armstrong and members of the College, in order to qualify myself with you I would like to say a little bit more about the contacts I have had with this problem of mobilization of the economy.

For some years before 1940 I had been associated with the Business Advisory Council of the Department of Commerce. That was a group of business people brought in to advise the Secretary of Commerce, and was an outgrowth of the old N.R.A. organization. I had been Deputy Chairman under Mr. Harriman in 1938 and Chairman of the Business Advisory Council in 1939. So I had had some experience in the problems of business in government before the first of July 1940, when I came here with Mr. Stettinius as his deputy on raw materials, at the time of the setting up of the National Defense Advisory Commission.

We saw that operation through for seven months, and I became one of Mr. Knudsen's two vice-chairmen under the Office of Production Management. Through 1941 I was Mr. Nelson's deputy and was one of the vice-chairmen throughout the whole War Production Board. I was at the office on Saturday, 3 November 1945 when the War Production Board was discontinued. Before that time and at the present time I am the Chairman of a committee set up by the White House to determine national policy on rubber, a committee representing all the agencies of the Government having an interest in rubber, the assignment being to report to Mr. Snyder, to the President, and to Congress on plans with respect to the disposal of our synthetic rubber industry and the relation of synthetic and natural rubber to our essential economy and our national security.

That gives you some idea of the part that I have played in this picture. As your Chairman has said, I have never been in a position of final responsibility except in one part of this operation, which I will touch on a little bit later.

You have had talks on the requirements of the Army and the Navy and the civilian requirements. I think there has been no reference made to one additional essential requirement and that is the need of supplying foreign requirements, whatever they may be. In World War II they were very substantial. Of course, if you add those all together, you have total requirements, the subject that has been assigned to me this morning.

When there is enough available material to meet all those needs, obviously there is no problem. But in an all-out war, the very concept of an all-out war, I believe, assumes that there will not be enough. In an all-out war the full resources of the economy will be stretched to the limit, and there will always be items that will be in substantially short supply.

The first task, then, before any group dealing with requirements is an assessing of the available supply and the total need; and to make then a final judgment as to how those two are to be balanced.

In the first days of 1942 following Pearl Harbor two significant steps were taken in the requirements field by this Government that I want to touch on briefly.

The President and the Prime Minister met here in late December of 1941 and came to the basic conclusion that supplies and facilities of these two countries should so far as possible be pooled in a common war effort. There was created in late December and early January of 1941 and 1942, respectively, a system of combined boards -- the Combined Chiefs of Staff, the Munitions Assignments Board, the Combined Shipping Adjustment Board, the Combined Raw Materials Board, and later the Combined Food Board and the Combined Production and Resources Board.

It was obvious when the Combined Raw Materials Board was set up that there would have to be a means of deciding how British requirements for raw materials should be assessed in terms of United States requirements. We had no mechanism with which to do that. It was agreed then, in January 1942, that the United States should set up a Requirements Committee under the general direction of the War Production Board. I was the first Chairman of that Requirements Committee.

On that committee were representatives of the various claimant agencie on our side. There were the Army, the Navy, the Maritime Commission, and the claimants for civilian requirements--ODT for transportation and FEA, or at that time the Board of Economic Warfare, and the State Department for foreign requirements. I think that represented the first list. Additions to it were made later.

The Chairman of the Requirements Committee had sole authority, subject to the approval of the Chairman of the War Production Board to decide how these scarce materials could best be divided. There I made my first mistake. I think it is useful to talk about mistakes, because then they may be avoided more easily in the future.

We were under a tremendous urgency. Pearl Harbor was fresh in our minds. The urgency of a war was immediately ahead of us. The terrific shortages were obvious to all of us. It seemed to me as Chairman of the Requirements Committee that speed took precedence over everything else.

I made some very arbitrary decisions in the first months of 1942 that I still think were right, but which aroused a considerable amount of unhappiness on the part of the agencies, sufficient to slow up the operations of the Requirements Committee for some months. The lesson I learned there was that, in spite of urgencies, we can move just about so fast; and that we must get our interests along with us if we are to get success in a democracy. And this is a democracy. So we developed underneath the Requirements Committee a sort of filtering structure, which I think was largely responsible for its success.

That leads me to the conclusion that in a situation of unreconciled elements it is essential that baffles be provided where the mud can be deposited gradually until finally fairly clear water is obtained. If there is a series of unreconciled points, it is a great mistake, I think, to bring the whole thing to a head at a single time and expect to get a decision that will stick. The thing to do is to provide a place where the lower level groups can arrive at some accord, where some of the differences will be settled; then another spot where some more of them will be settled. Finally, when the point is reached where a decision needs to be made, people have pretty well talked themselves out. They pretty well understand what the facts of the situation are. They are pretty well reconciled to somebody making a decision, and they will accept the decision once it is made.

I mean, the chairman of the Requirements Committee had the authority to decide how these materials should be divided; but we recognized that between such great claimants as the Army and the Navy, not to mention the others, a decision which took materials away from one and gave them to the other was a very important decision. That it was made as well as it was, I think, is because of this device which we developed of providing discussion points at which these differences could slowly be reconciled before the issue was positively and irrevocably pointed out. If I leave nothing with you but that advice, I think I will have given you something that is worth while.

Now, in those first days, particulary in 1941 and in early 1942, the Army and Navy Munitions Board was a valuable piece of machinery in reconciling differences between the two Services. I give Mr. Eberstadt great credit for the thoroughness with which he operated the Army and Navy Munitions Board. One could take an unreconciled difference in to Eberstadt and get an answer and it would stick.

The difficulties between the Services are probably more familiar to you than they are to me. Anybody who expects the Services to reconcile their own differences between themselves quickly is not realistic. As I said to Captain Henning, who brought me out here this morning, there are many instances in which a civilian who knows what it is all about will reconcile those differences between the Services much more easily than they

will themselves; I think the reason for that is obvious.

There are certain fundamentals that one must recognize as being responsible for that situation. They go to the heart of the priorities question. Each of the Services was charged by the Congress with a duty. The Army has to organize a military establishment and has certain objectives for that establishment. So has the Navy and so has the Air Forces. Neither of them yield to the other in the essential requirements of their jobs. The further down from the top, the more vigorous the lower-level people are in standing on their responsibilities. So that there was very great difficulty in those days, and there always was during the war, in deciding whose claim had priority.

You will have recognized, if you have been in touch with your bases of fixing your requirements, that the job was always too big for any one man or any two men to properly evaluate, when subject to criticism, in a short time. The total of these requirements was generally an adding machine total. It almost had to be that, because the requirements, changing as rapidly as they did, coming in from as many sources as they did, were enormous in number. It was no easy task for the Requirements Committee to decide that the Army should have more steel and that the Navy should have less. I believe all of the representatives of those agencies who sat on the Requirements Committee are entitled to great credit because of the tolerance which they showed one another.

The way that operation works is rather important. It is this: The total of the requirements for each class of critical material would be assembled and made available to the Requirements Committee staff. Added up, it was quickly balanced against the available supply. Then you had the picture. In many cases in critical materials we found the total of those requirements anywhere from a third to fifty percent above the available supply.

Now, what was the first thing we did? We stated to each of the claimant agencies that the amounts available were far beneath the requirements indicated and asked them to please go back and screen their own requirements. That produced some results. Of course screening was an operation that one group of men would do better than another. The requirements figures would come back and there would be some reduction in them. There still was not enough to go around.

Then we suggested that these claimants take notice of the claims of everybody else. The Army and the Navy always joined on one thing and that was attacking the claims of everybody else. The poor civilian people got it coming and going. The claimants for foreign accounts got it in the same way. I remember an expression coined by somebody on the Requirements Committee in the early days when the State Department and the Foreign Economic Administration were pressing on something for Bolivia the real purpose of which was to secure more tin coming from Bolivia. But, as it was put critically, it was a claim for a vital material just to provide beans for the Bolivians. That did not seem to be very important in time of war. So each of the agencies was turning the spotlight on the claims

of the others, and that brought the needs down. Under that pressure we would get some more reduction.

In the meantime there was a group of people in the War Production Board who were doing everything they could to increase the supply. Could new plants be created? Could by subsidy or otherwise additional production from existing sources be enlarged?

Finally there came a point where it was decided that the maximum had been obtained. The WPB got its supply as large as it could and that fixed the supply figure; the requirements figures were made as small as possible. Then the chairman of the Requirements Committee used his best judgment and brought out the answer and there is was.

There was then an appeal available from each of the claimants to the Chairman of the War Production Board, whose views, subject to appeal to the President, of course, were final. There were very few such appeals by any one of the agencies.

There were many abuses in connection with all of those things. Most of those abuses were unintentional. If any of you have had to do with the preparation of requirements, you would be the first to admit that.

The philosophy, of course, behind it is understandable. The Services had been trained to believe that they ought to have the best there was; and, so far as the business of making war is concerned, that is quite all right. But they carried that same philosophy, when left to themselves, right through the program. If you knew that it was essential that you have a cartridge case gold plated, you would naturally carry that gold plating through the whole shooting match whether it had to do with killing the enemy or not. You would have that until somebody got on to it and brought you up to terms or until you found it out yourself.

Those abuses were never in any case intentional. I do not know what they amounted to in detail. It was inevitable, of course, that much of our war plant procurement was wasted. Adequate provisions had not been made.

The country would not permit adequate provisions. I have cited many times as an example that when General Marshall went before Congress in the spring of 1940 for an appropriation for tactical planes--the war had been on in Europe for eight months--he got an appropriation for 57 planes. That was the way the country was thinking, and that was the way the funds that were available, particularly for the Ground Services, were being made available. So after Pearl Harbor in 1941, when Congress began to ease up and we got all the money we asked for right away, we did not know how to spend it rightly, because there had not been time to build up our organization to gain experience.

Prior to any considerable discussion about unification of the Services, I gave my personal opinion to General Armstrong that in another emergency

separate procurement on the part of the Services should not be permitted. Nor would I put that procurement in the hands of men in uniform. There are several reasons for that.

A man in uniform is under the pressure of the requirements of the uniform. It is very difficult for a major to talk back to a general. No man that I ever heard of in the Services was promoted for having too little. The premium is inevitably in time of emergency on having plenty.

I will never forget the situation as between this country and Great Britain in the fall of 1944, or I might say, in the last half of 1944. As all of you know, the British put the procurement of all military items except admiralty in the hands of civilians. They never got hold of the Navy quick enough over there. They never succeeded in getting hold of it in wartime, but they got everything else. In the summer of 1944 they saw the beginning of the end of the war in Germany. They did not taper off as we did. You know we began to pull the plug fast in the summer of 1944, much too fast. The British did not go nearly so fast. There was a great deal of criticism on the part of our military representatives on the combined committees because the British had not cut their program fast enough.

I think they were much more realistic. The civilians who headed up the British military procurement were members of the cabinet. They had no risk attached to them for what they did, because they were doing it as a part of a unified government policy. When the British Government had decided that it was going to estimate the end of the war as about June 1945, which it did in the summer of 1944, there was no responsibility attached individually to the people responsible for production. They set a program which tapered off from the late spring of 1944 and which was supposed to pretty well run out in the middle of 1945, and they never had to change that program.

On our side we began cutting down very sharply in the fall of 1944. We were frightfully scared with the Bulge operations in December. We started again, as if the war was going to last forever, at the full rate of possible production of the United States; all of you know that is not an over-statement. We started programs for equipment in December of 1944 and in the spring of 1945 that could not possibly have come in until the end of 1945. With the military intelligence which I know we had, I was then convinced that those programs were of a size not warranted by the situation.

I believe that unified purchasing and purchasing in which the best civilian brains of the country, adequately trained in the program, at a sufficiently high level of cabinet authority, would have substantially improved the efficiency of our procurement and would have avoided the takir of risks which, I submit, the man in uniform is not permitted to take.

That is the background of this requirements program. It will always be difficult in wartime. It ought to be undertaken, in my judgment--a study of the needs of a country ought to be undertaken and ought to be

constantly going along in peacetime. There ought to be an effective unification of the interests, military and civilian.

I recall very well being troubled in 1939 and early 1940 in Philadelphia by the claims of the Services that were made on the facilities of the plant that I was then running in Philadelphia. Ordnance was in, staking out machinery for its needs. The Air Corps was in, doing the same thing. Much of the time they were taking the same machines. There was no coordination of any kind, shape or form that we could see. It may well have been that the Navy was in there too, but I do not happen to remember that.

The procedure was unsound. There must be a close relationship between a good cross section of business management, those who are producing goods and the Services in wartime, and the Services running through peacetime, ready to move into action at the drop of a hat if an emergency develops.

The Army and Navy Munitions Board had some of that in their advisory Committees on raw materials. The work which those committees had done in the years preceding 1940 was invaluable when the program was put under way in the fall. There was not that same contact, so far as I know, between the Services and industry on the production possibilities of the country.

I feel very badly about these various services appealing to the American public for support. I cannot remember all the names, but I know the Air group, the Navy group and the Ordnance group interests were being appealed to from too many angles. The problem is exactly the same. This is an understandable interest on the part of each of the services to get the maximum of support from the public that it can. But I think it is unwise to abuse that support. It seems to me that there ought to be one point of contact between the military and industry. If that is done, the value with Congress on appropriations and with the military on the development of the plan is retained and we get the maximum out of that relationship. Industry will not be confused and its efforts will not be divided.

I think, General Armstrong, that will open the ground for questions. I think I have been provocative enough, I am sure, on some of the things I have said to suggest questions.

GENERAL ARMSTRONG:

I do not think you have provoked anybody. I did not see any evidence of it.

I would like to say for the benefit of the class that we are very much concerned about the last relationship of which you spoke. We have already established a great many advisory committees--from the Iron and Steel Institute, the aluminum industry, the antifriction bearing industry, and so forth--to the Army Industrial College. Through those committees

we expect to maintain, at least on a top level, a relationship between army and navy planning on the one side and the resources that those committees represent on the other.

We are very much concerned with the competitive situation that is arising as between the Army Ordnance Association and the Navy Industrial Association; and for the last three months I have been trying to organize the heads of those groups into a committee which would in some sense provide the coordination of their activities which is absolutely essential, as you have just pointed out, in avoiding a competitive situation. We are trying to do something about those situations that you point out.

I think there is going to be a great deal of discussion about your concept of the civilian agency that would procure for the Army and the Navy. As a matter of fact, I have seen in some economic paper some very severe criticism of that British organization of which you just spoke, because of the fact that it continued to procure in spite of the end of the war. Therefore there is on at least one phase of their activities ground for criticism. But I am not going into that, sir. Possibly you will want to bring that out.

It seems to me that the right philosophy on which we must base our planning is that there will be no great dividing line between war and peace, particularly on the industrial mobilization side. It seems to me that we must have in peace the organization we are going to have in war, and merely depend on the expansion of that organization; that we should adopt at an early date a civilian organization for procurement and have it operating so that, if another war comes, it will be there at least in elementary, nuclear form.

MR. BATT:

Yes. I would think so, General Armstrong. I have heard the same criticism on that point about the British but I can assure you that will be a part of their cabinet policy. Whatever it is, it will have been the determination of that government and will not be the result of a single agency that merely had some money left to spend, so they propose to spend it. It will represent the policy of the British government.

Of course, that is a basic weakness of the United States, for which I see no particular correction. It affects the peacetime economy very seriously, and it affects the wartime economy. We have no means for quickly making unified policy. It is not so serious in wartime, because through the Joint Chiefs of Staff, who always have immediate access to the President--in wartime, of course, the President will look on it as his number one job--policy is more easily made. In peacetime you are familiar with the pushing, pulling and hauling that go on between the agencies and the difficulty of determining a policy.

GENERAL ARMSTRONG:

I would like to say this: We in the Army and the Navy have always believed in the Ciceronian admonition that arms yield to the toga. You gentlemen are aware that the toga has had complete control of the Army, and quite properly, and you have told the Army and Navy what to do. We believe that is absolutely necessary in fighting a war.

MR. BATT:

General Armstrong, excuse me, but that was rather more theoretical than real. It is always very nice and very modest for you to say that, but in practice it did not work that way. The Services got most anything they wanted if it was available.

A STUDENT:

I would like to ask one question. As I understand it from talking with a lot of British officers, their procurement was done by civilians.

MR. BATT:

If it was, Captain, it was done within the Admiralty.

A STUDENT:

But in the Admiralty even the designing was done by civilians. They designed two types of ships. About a week ago in the magazine "Life" it told about a number of the capital ships they had and how horribly they performed on their mission, according to the Prime Minister. Would you want our battleships to be designed like that?

MR. BATT:

I do not believe that civilians should design military equipment. I was very careful not to say that. I do believe that trained civilian procurement methods will be more efficient in time of war than will those that come out of men in uniform. I say that because of the restrictions under which I know you operate in uniform. At least I think I do, from having watched them for five years.

A STUDENT:

Your system presupposes that you would have a highly trained staff of civilians to do that job?

MR. BATT:

Oh, absolutely.

A STUDENT:

What are you going to do when the draft comes along and starts pulling them out?

MR. BATT:

I would not let them go.

A STUDENT:

How are you going to keep them from going?

MR. BATT:

Of course, there we get into a large subject. I think our exemptions were not too well handled. I am sure that a man trained in procurement methods was much more important to the Services doing that kind of a job than he was carrying a gun; he never should have been removed.

A STUDENT:

How are you going to stop the Selective Service from putting that man in uniform just as soon as war breaks out, as it did in many cases?

MR. BATT:

I would not let them if I could prevent it.

A STUDENT:

Would you define what you mean by "procurement program?"

MR. BATT:

I mean generally the business of first taking the responsibility for analyzing the requirements and for then making up and placing the orders.

A STUDENT:

You would then turn over to civilians the power of handling the military requirements of the Services?

MR. BATT:

After they had come up through the fighting arms.

GENERAL ARMSTRONG:

You would put in the hands of that agency the responsibility of computing the requirements. That is what I think he means.

A STUDENT:

No, sir. He does not.

GENERAL ARMSTRONG:

He is talking about quantity.

A STUDENT:

I am not talking about quantity necessarily. I am talking about what the soldier fights with.

MR. BATT:

I tried to make that clear in answering another question a moment ago. I do not believe a civilian knows or ought to be trusted to know how ships, a gun or munitions ought to be designed. I think, however, that after a type had been accepted by the Services and a bill of materials made up for them, I would let a civilian come in at that point. I would have him with sufficient authority to be able to put the Services on the spot as to how they had computed their requirements.

A STUDENT:

Would that then be limited to purchasing?

MR. BATT:

Yes. When I say "procurement," perhaps I should say "purchasing."

A STUDENT:

Because there is a lot of difference there. "Procurement" would take in a tremendous field that "purchasing" would not.

MR. BATT:

I was using a concept of procurement that is maybe more common in the Services. Purchasing is what I had in mind.

There is just one further thing on this question of making up requirements.

The man who is in the final point of responsibility for fixing the requirements ought to have the benefit of judgment different from his own in arriving at those requirements, because invariably he cannot see the forest for the trees. I am sure I would be the poorest man to decide how many ball or roller bearings a country should use in war. I will give you an example that I gave General Armstrong before we came in here, on steel.

I made a speech in December of 1940 before the American Society of Mechanical Engineers in which I said that I was convinced that we were going to war and that I was equally convinced that we would fall substantially short in our supply of steel.

A couple of days after that Mr. Stettinius, who came out of the steel industry, called me in and in a very nice way said he was being taken seriously to task by the steel industry because of my statement; that the steel industry thought it was completely unwarranted and unfounded; and that it did great harm to have such a philosophy as that put out by Mr. Stettinius' deputy, since under no condition could the steel industry fail to supply this country with all the steel it needed in any kind of emergency. He just asked me how I reached such a conclusion.

I told him it was not original with me; that it had been developed by one of our brainy fellows in whom I had great confidence, who had very simply stated that this was the way he arrived at it: Most of the countries then at war had proven that about 50 to 60 percent of the economy could be used for the production of war goods and 40 to 50 percent for civilian goods.

Where their goods were very heavily capitalized, capital goods production has historically required about so much steel per thousand workers. There will be about so many men producing those goods; multiply one by the other and we come in with between 90 and 100 million tons of steel. I said, "Ed, that makes sense to me. What do you think about it?"

Well, he did not know what to think about it, but he said there was nothing he could say. He still felt that it would not work out that way; but there was no flaw that he could pick in the argument.

We did need 90 to 100 million tons of steel a year. That type of analysis is not going to be made by steel men. Many of the figures for materials, arrived at by the line of thinking with which you are familiar were completely incorrect, as you know yourselves. They might very well have been substantially changed if they had had completely dispassionate objectives and an analytical approach.

I have great confidence in good economics and good statistics in this war. There were, of course, some that were not too hot, because we had no statistical training for that type of man. I think we will have subsequently. They are of incalculable value as checks on the reasoning of specialists.

A STUDENT:

I have been thinking about procurement by civilians. Your philosophy on that appeals to me considerably. But also the practical application of it raises grave doubts in my mind.

COLONEL JACKSON:

If you have a procurement establishment, how are you going to get rid of the effect of the stratification and solidification that you get as the price of having life-long civil service employees?

MR. BATT:

Colonel Jackson, I would not have it. No. That is not in my thinking.

COLONEL JACKSON:

All right.

MR. BATT:

I do not know how you would avoid it. I think we must get around this rigid application of civil service restrictions to all classes or modify them.

A STUDENT:

In our technical procurement we have had to develop the end item in the factory itself. It has been my privilege to be able to go right into the factory and call on the manufacturer. I do not see how that could possibly be done under civilian control without inevitably the officer staying on the job. I am thinking of the Seabees now.

MR. BATT:

I do not know enough about that. I am ready to admit that the Seabees did a swell job. I do not know enough about that to continue the discussion intelligently.

A STUDENT:

The Army and the Navy had a rather detailed procedure for determining requirements for electronic materials, which was quite elaborate and, I think, different from that on other types of materials. From the viewpoint of industry was it successful relative to other things?

MR, BATT:

I think on Signal Corps equipment Bill Harrison had all of that for both services, did he not?

A STUDENT:

No, sir. It was operated under the Combined Chiefs of Staff.

MR. BATT:

I do not happen to know about that at all.

A STUDENT:

I was wondering how their problems that came up to the Requirements Committee on material loomed in comparison with that of any others or whether the procedure and the organization were successful.

MR. BATT:

I am sorry, Captain. I do not know.

A STUDENT:

Mr. Batt, would you have this essential civilian procurement agency act as a cabinet member? What I am thinking about in asking that question is whether or not it would have enough weight to do the things that it would have to do, which would be largely that of regulating and controlling the economy of the country. Would its members be likely to have enough interest in the war job as contrasted with that which they were normally associated with in the peacetime economy to operate effectively in an all-out war?

MR. BATT:

Of course, this proposal for a unified service will meet many of the objections which we found so common during World War II. I think it quite possible that what I call procurement, you prefer the term purchasing, may be headed up adequately underneath the single head of the Military Services. But I agree with you that this man must have large authority.

Now, I do not believe that you need to feel that he will be too civilian-minded. A good proportion of you men came out of business life into the uniform; and you know that, given the will and the heart, you can be just as coldblooded with respect to what your past obligations were as anybody could ask you to be. Indeed, we found in the War Production Board that the larger percentage of our people were tougher on the industry they had come from than would have been the case if they had not had that background. They were trying to avoid the charge of being partial.

A STUDENT:

I was not thinking of that class of people. I know that to be absolutely true. I was thinking more of those people who formed the procurement heads, so to speak, in the peacetime economy, that is, the procurement organization within this procurement agency. The people that you call in during an emergency would be pretty apt to have a good sense of balance as between the urgency of the civilian economy, from which they came, and the military, in which they find themselves. But I do not believe that is quite true when you get more into the class of people that Colonel Jackson was talking about.

MR. BATT:

Of course it is inevitable that on a point like this we get into a discussion of the details. I am not prepared to discuss those details. I want to lay merely the large principles before you.

During this war those of you who had enough experience across the board know that we had a tremendous number of those problems. The Army and the Navy repeatedly competed unnecessarily with each other on programs. You know there was a lot of duplication. You know that much better than I do.

Now, I am simply pleading for some kind of system. Any body that will provide a system that will eliminate as much as possible of this unnecessary duplication, that will give to that organization the power to have a fairly long-range objective in its supply program--I do not care what kind of cloak it wears on its back.

I think that can be done better by men in civilian clothes. Certainly I do not propose to dissociate them from the Services, and I do not propose to put in their hands a technical job of designing the things with which you fight. The bureaus certainly ought to have that responsibility.

GENERAL ARMSTRONG:

Mr. Batt, what I was going to ask you was this: You must have a very serious indictment of Army and Navy procurement in this war to cause you to suggest any such drastic shift as you have recommended this morning. In addition to duplication were there any other lists of crimes that you would charge to the Army and the Navy procurement system? When you take a time-honored system that has developed and which has worked more or less successfully and propose new changes, I think you have to support that with a great deal of factual data and arguments in favor of any such change.

MR. BATT:

It is proposed, if I may suggest, General Armstrong, by many of your own people--men who have had a great deal more experience in the problem than I have had. It is not a new proposal at all; and I do not have the idea of making any kind of indictment in any shape or form. I have no doubt that it was inevitable as the situation was allowed to develop.

I remember in the spring of 1940 that the Ordnance people in Philadelphia had, I think, not more than a dozen people in their organization. There must have been some stenographers also.

GENERAL ARMSTRONG:

I was in Chicago and I had four.

MR. BATT:

Then perhaps I should have included secretaries. That organization grew faster than it was possible for an efficient organization to grow. Each of those men was charged with a job, and he went out to do that job regardless of what happened.

I submit that there ought to be some means of screening those requirements more effectively than was available in this war. If you can find that means, I will be satisfied with it.

GENERAL ARMSTRONG:

That is a very interesting point, because we feel, as we look back on our prewar training, that the training was inadequate both in quantity and in quality, of Army and Navy officers to meet this job of procurement. We propose a very drastic change. We propose two courses of procurement training--one at the lower level, where officers of the Army and Navy will be trained in the operational work of procurement; and then finally, in the fifteen or twenty year level of their training they will come to the Industrial College, which will be alongside of the Staff College on the topmost policy and supervisory work of the Army, and we will be training them on the industrial mobilization side of war preparation.

Do you not think if we effect greater training and point out more effectively the necessity for coordinating the work of the Army and the Navy--not only between the Army and the Navy, but there must be better coordination within the Army--that will solve many of the problems that you ran into in this war?

MR. BATT:

It should. And I back that up by saying that the proposal for a unified system would, I think, remove many of the very unhappy situations that developed.

GENERAL ARMSTRONG:

You see, we are talking here regardless of legislation as between the Army and the Navy.

MR. BATT:

Then why do you call this the Army Industrial College?

GENERAL ARMSTRONG:

I have been doing everything that I can to change that.

MR. BATT:

You see, if I were in uniform, General Armstrong, I could not ask a question like that.

A STUDENT:

May I ask one more question? I was under the impression that the stockpiling of materials was purely handled by a civilian agency. Yet two years before the war we could have bought all the tin we wanted. Everybody could see what was coming. Everybody could see at that time that we were never going to have enough tin to carry on a war. If we had that same kind of civilian planning in procurement on a very high level, how would that affect the lower level purchasing?

MR. BATT:

I do not think, Captain, that your original premise is a correct one. The Army and Navy Munitions Board was responsible, to the best of my remembrance, for the control of all strategic stock piles.

Congress was fundamentally at fault in not providing the money. Nobody could deal with that problem if they did not have the necessary money. In 1935, when the stockpiling bill was passed, if I remember correctly, the first money made available was around ten million dollars. I think they had no money until 1940. You remember, the only way we got the first rubber that we did get was by barter with cotton through the RFC. There actually was very little money available in the spring of 1940. That was the fault of the Congress. The machinery was set up and the levels had been fixed by the Army and Navy Munitions Board.

A STUDENT:

That procurement, then, was by Congress at a very high level?

MR. BATT:

So far as the providing of funds was concerned, yes. In that case there was no procurement problem, because anybody could buy the tin and the lead that was needed if they had the money with which to buy it. That was the responsibility of Congress, and nothing can heal the breach if Congress does not provide the money. There is no doubt about that.

A STUDENT:

I have found in my experience in the Service that the relationship of which you speak, whereby an officer is afraid to do what he thinks he should do because of anyone higher up, in my opinion does not exist. I had an admiral that I had to deal with on my job, and he gave every consideration to what I said, the same as if I went to the president of a company in civilian life. It would not have made any difference if he had been a civilian. It would have served the same purpose. So far as fear of reprimand is concerned, that officer never gave me that impression.

MR. BATT:

You must not put words in my mouth that I did not intend to use. I did not like to use that expression--afraid to go to his commanding

officer--because that at once puts a totally different color on the situation. But I do not want to pursue that argument any further.

You provide something a great deal better than you had in World War II, whatever it may be, that will eliminate the wastefulness of the World War II in procurement, and I will be satisfied with it. If you can provide it through the uniform, all right; go ahead.

A STUDENT:

May I take sides with you? I was on the Army's side in the copper battle during this war for small arms ammunition. I had to meet certain requirements, which personally I think were astronomical. We should have told the Staff that nobody had any basis on which to base those requirements.

On the other hand, I had to go to the WPB to get copper for brass strips. I want to make a differentiation there. The WPB did not have too many strong civilians in the beginning of 1940. The strong civilians did not come into the WPB until their business began to fold up through shortage of raw materials. It was only then that we were able to pull in those individuals. Then, when those fellows came in, we began to get some real help; but it was too late. They offered to give me all the copper I needed to make ammunition; but that was not what I needed then. I did not have the strip facilities. Who is going to handle that no-man's-land in between there, to see that we have strip facilities on time?

MR. BATT:

That was lack of funds, partly. It was partly, I think, an inadequate concept on the part of a good many of us as to how much of that kind of fabricated material would be required.

But in the spring of 1940, as an example, there was no money available to expand the aluminum facilities. I am sure there was no money available for strip facilities. It was only in May 1941, if I remember correctly, when the Air Corps got a pretty sizable appropriation--I think I am correct in those dates--in the beginning of May, that the first enlargement in the aluminum system was made on funds which the RFC had made available. I think the Air Corps refunded them thirty or sixty days later. But there were no funds available before that to not only provide the raw materials, but most certainly to enlarge the manufacturing facilities.

We made some pretty bad guesses in there. WPB did and all the others did. I remember a meeting that I held in July 1940, I think it was. I brought in the largest copper consumers and the copper producers and the representatives of the Services to decide whether or not we ought to buy a hundred thousand tons of copper from Chile. We spent a day or two arguing on that.

I could not get an agreement out of that group to buy a hundred thousand tons of copper at one time. They finally did agree that a hundred thousand tons would be desirable if not more than twenty thousand

tons could be ordered at one time. That purchase program had no more than gotten started, certainly not more than sixty days, when we took all the hundred thousand tons and placed an order for another hundred thousand. Month by month through the fall of 1940 those requirements were changed as ammunition changed.

I had to testify for three days before the Murray Committee trying to justify all the things we did in 1941 and 1942. That, of course, made it necessary for me to post myself on all these figures. They showed that those requirements changed from day to day. That, I presume, is unavoidable. But there was no money available in 1940 and early 1941.

A STUDENT:

That seems to be a very serious problem.

MR. BATT:

Yes, it was, because, while raw materials sometimes were bottlenecks, much of the time facilities for fabricating were more critical than the raw materials themselves.

CAPTAIN HENNING:

In planning for a future industrial mobilization how far along industrially do you think the plans of the civilian agency should be set up? Should they be very general, or should they perhaps go so far as to bring in the people who would serve in such a civilian war agency?

MR. BATT:

I have not given too much thought to that, Captain Henning. But I am sure you should not wait until the shadow of the emergency is on you. I do not believe that any time is too early to begin to have the clock set. I know of so many situations where a better contact with industry, well headed, would have been much more useful.

The captain from the Seabees, whose name I do not know, tells us how closely they were working with industry all the way through. Generally the military were not able to do that. One reason for that, I think, was that we never had enough money to go to industry and intelligently ask for much help.

The following applies more particularly to ordnance and I would like to have the judgment of any Ordnance officer who happens to be here this morning: If you look at the early designing and contrast that with what was done by industry in wartime, when they got the war quantities of goods, I think you will agree with me that those developments were rather fantastic. Certainly they had a profound effect on ordnance materials requirements.

Take a thing like the primer case. Ordnance designs when we went into the war were for a primer case made out of solid brass. I do not want to get into that too deep technically. I may so disqualify myself as to invalidate every other point I want to make. Your requirements were figured out on the basis of rods, solid rods and the machine tools for producing that piece, but when--the automobile business got into that industry that primer case was pressed; the amount of material was entirely different; and the amount it required was enormously less. The primer case could not be made the old way, because of the shortage of dies especially. Whether the providing of an adequate contact with industry before the war and the setting up of drawings would have saved any time, I am not qualified to express an opinion.

I need some help here, General Armstrong.

GENERAL ARMSTRONG:

We will back you up.

A STUDENT:

We at Frankford Arsenal had a laboratory report on the conservation of material; so we stuck our necks out in handling the developmental job with the production line people. We said, "You have got to make ammunition out of steel on the production line." They succeeded in doing do. However, the copper situation got so that the steel program was not carried to the extent it was originally planned.

MR. BATT:

Yes, But that was done up in Washington.

A STUDENT:

But industry did the whole job. They did a pretty good job.

MR. BATT:

What I had in mind had to do with the peacetime requirements.

GENERAL ARMSTRONG:

Mr. Batt, this class has paid you the compliment of being not only willing but eager to sit on these extremely uncomfortable chairs for well over an hour. I think that has been the case on very rare occasions. I think it should be extremely gratifying to you as to the interest in your talk here this morning.

You certainly have raised a great many important questions. This class is prepared to examine these things objectively and not in the light of prejudice or personal likes and dislikes. I think it can quite fairly examine all the proposals that you have made, which are of great interest to us. I want to thank you in behalf of the class for an extremely valuable talk to us.

MR. BATT:

And I want to thank the class for the privilege of being here.