RESTRICTED

ORGANIZATION FOR THE DETERMINATION OF REQUIREMENTS

13 November 1947

CONTENTS

Page

SPEAKER— Mr. John D. Small, formerly Administrator of the Civilian Production Administration . . . . . .

GENERAL DISCUSSION . . . . . .

Publication Number L48-38

THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

WASHINGTON, D. C.

RESTRICTED

ORGANIZATION FOR THE DETERMINATION OF REQUIREMENTS

13 November 1947

GENERAL McKINLEY: Gentlemen, this lecture is the ninth of a series of presentations by the Organization and Administration Division. We are fortunate today in having as our speaker a man with a great wealth of experience both in the converting of American industry to war production and in reconverting it after the war.

Commodore Small participated actively on behalf of the Navy in the accomplishment of its most important and difficult production problems. His work was so efficient and so broadly recognized throughout the war agencies that he was selected as Executive Officer of the War Production Board. At the termination of World War II Commodore Small was appointed by the President to head the Civilian Production Administration, and in that capacity provided guidance for the programs of reconversion from war to peace.

Commodore Small will discuss for our benefit the subject of "Organization for the Determination of Requirements." I take great pleasure indeed in welcoming back to our platform Commodore Small.

MR. SMALL: General McKinley and gentlemen: It is always a pleasure and an honor to meet with you gentlemen. I always come down here with a little trepidation for the question period. However, don't hesitate to ask any questions that you like as I move forward through this discussion.

It is a very challenging job that you are involved in, that is, the determination of requirements for the Armed Services and the relationship of those requirements to the mobilization of our economy in times of emergency. A great deal has been written and a great deal has been said on this subject, that I know you are familiar with. There is no point in my reviewing a great deal of it. I will try to touch a few of the high spots of experience and try to light up some points I think are important.

World War II approached total war. It didn't get to it, but it approached it. We were rapidly moving to that point when the end of the war came. We never did get to the point where we found out how much we could squeeze the civilian economy or how great a proportion of our resources should be devoted to the Armed Forces. But we learned a lot of lessons. We learned a lot of places where we squeezed the civilian economy too much and other places where we knew we had not squeezed it to the limit.

We are all agreed that we hope and pray there will not be a new emergency in our time, but the shadow of the storm is on the horizon. There are portents in the sky, if you like. You gentlemen, who are the spearhead on the material end, must be ready for that emergency if it comes.

The past is prologue. You are studying the past. Only by your studies and decisions can we avoid the mistakes that we in the Services made by trial and error as we progressed through the preparation for World War II and during the war.

The next emergency, I think everyone agrees, is going to be terrifically fast, incredibly fast. The last time we had time to prepare. Although time was always desperately short, we did have the time. Perhaps we are not going to have much time again, if any. We will have to do as much of this work ahead of time and be as adequately prepared as possible if we are to save lives and time in the winning of the victory.

This time, when the emergency comes, all of our resources—men, money, and materials—must be marshaled immediately, so that we can have them all running at the same speed and in balance, so we can give our fighting forces the materials they need and still keep our economy sound and running. They cannot be considered separately, in my opinion. We must consider them all at the same time and gear them all together.

We have to marshal these resources to do two jobs, twin jobs. One is to keep our economy strong and healthy: the other is to give to the Armed Services those things that they actually must have in order to win the war as quickly as possible. Both of those things must be done.

At the beginning of the late war we in the Services had the idea that there was a terrific amount of material available to the civilian economy; that we could therefore afford to ignore that economy and go ahead and take what we needed and the rest of the people could live adequately off what was left. We know now, and we learned then very quickly, that the railroads, the petroleum industry, the power plants, the war plants, the housing, if you like, for the war plants—all sorts of things were just as essential to us as are guns. We must recognize that in the beginning and adjust ourselves to it.

I am positive that the great bulk of our people will support the contribution of any share of our resources to the Armed Services that is needed, as well as to accomplish the other aim, which is to keep our economy strong and healthy. I am sure they will support that. I am sure they will make any sacrifices necessary and make them good-humoredly. On the other hand, I am equally positive that the great bulk of our

RESTRICTED

people will not support unnecessary sacrifices and unnecessary burdens merely for the sake of meeting unrealistic, extravagant, or inflated ideas of the Services, or meeting demands for resources that they may or may not need. If they believe in your estimates, if they believe in your requirements, they will be glad to make the sacrifices. But the burden is on us to demonstrate what we need, when we need it, the quantity, and the time.

There are those who believe in a regimented economy in time of peace. I am not one of them. Regimentation and controls offer plausible arguments and appeals to those people who believe that we can handle these things in time of peace in a more orderly fashion. They forget, or they do not realize, something that we learned over and over and over during the war—that in this terrifically complex fabric of our economy if you pull one string here, you start to unravel somewhere else. You can't tell where you are going to unravel. Put a strain here and you put an unbearable tension somewhere else along the line, usually in a place where you cannot possible for tell that it is coming.

Let me give you an example. After the war we were involved a year and a half ago in a housing shortage. We needed two-by-fours to build houses. In order to get two-by-fours it was decided that we would permit a little price differential to make it desirable for the forest products people to produce two-by-fours. It made common sense. We said, "Let us get more two-by-fours out and less of something else." Within forty-eight hours we had frantic appeals from the west coast. We had ruined the broom handle industry. They were completly out of material. They couldn't get any. All the materials that had gone into broom handles were going into two-by-fours.

It is like that all through the economy. Every time you touch something, it is like pushing on a balloon filled with water. It bulges at some unknown place. These controls, this regimentation, if you like, will do that. I am convinced, and have said this repeatedly, that there is no mighty brain down here in Washington, no group of brains down here in Washington, that can possibly control in peacetime all of the infinite multitudes of adjustments that have to be made daily in running business, most of which are being handled fairly adequately by normal business methods.

In time of an emergency we must have a completely regimented, completely controlled, economy. Not a partially controlled one. You must go the whole hog when you get into this. But in time of peace, which is where we are now, regardless of the risks, even though they are darker than they are today, I for one am for a free economy, for free enterprise.

RESTRICTED

I believe quite simply in freedom. There are a great many people who for selfish or idealogical reasons will use any pretext to put on a control and say, "Let us get back into this control system." It is bad for us, in my opinion, and bad for our country. I recognize of course that some few controls may be necessary for a time—such as controls to prevent excess export drains. But they should be held to the barest of bare minimums.

If the late war taught us anything, it did teach us one thing and that is that the resources of the country can be, and they must be in time of emergency, divided equitably among all of the essential services, giving everybody their fair share. They can be divided equitably if we know the facts. It is our job in the Services and the job of you gentlemen as you go back to your tasks in the Services to develop those facts. We must maintain ways and means for determining our actual minimum needs in time of emergency and for presenting our claims for resources clearly and convincingly to the authority which will make the allocations to the individual segments of the economy.

That job was being done and well done at the end of the war. The Services' claims for resources had been presented more and more realistically month by month as we went through the last couple of years of the war. At the end of the war the claims of the Services for resources were being received with very great respect, both as to the reasonableness and as to the accuracy of what they needed. In the beginning that was not true, but at the end of the war we had come down to a point where everyone was doing this sincerely and doing a real job.

It is obvious, if we are to be adequately prepared for an emergency, that the Services must maintain current, up-to-date, comparable, sensible, reasonable, and reasonably accurate estimates covering their claims for resources. It is equally obvious that the reasonableness and accuracy of those claims must not only apply to quantity, but to timing. There is no point in claiming something today when you don't really need the stuff until a month from today.

I remember during the early part of the war—I am not being critical, I am just talking about the way these things developed and the way they should be developed—that small arms in the Army came in with a claim for copper for small arms ammunition for the next quarter that was greater than all of the copper produced in the world by the Allies and by the enemy. There is no point in doing that. We still need a little copper for telephone wire and one thing or another. The claims must not only be fair, reasonable, and feasible but the schedules must be fair and reasonable considering the materials available for them.

How are we to develop our realistic, feasible requirements? That is like reciting the ABC's to you gentlemen. The JCS prepare the strategic war plans. The Military Services translate strategic war plans into operational plans, and these in turn into lists of requirements of munitions and products. These lists of munitions are in turn broken down into raw materials, critical components, and common components. The total requirements of the Services are screened and refined and then combined in order to come up with the total requirements of the Armed Services. The requirements of the Armed Services, plus the essential requirements of the war-supporting economy, are then measured against feasibility, and a fair and equitable division is made of the available supply by competent authority.

In the case of every shortage item all through an emergency it is obvious that either production must be increased so that it is no longer short; or, if production cannot be increased, that some segment of the economy must give way in whole or in part so that more essential things can be taken care of. It is equally obvious that all claimants for shortage resources must voluntarily and of their own volition hold their claims down to honest, bare minimums. That is much more easily said than done.

Let us look at what happened the last time in the Navy, the Service with which I am most familiar, with which I worked.

At the beginning of the late emergency the Navy Department had no coordinated procedure for estimating material requirements. To a large extent the Navy Department felt that for most items the resources of the country were sufficient to provide for all of the needs of the Armed Services and for the civilian economy without too great difficulty. Time and events were soon to prove that that concept was unrealistic.

During 1941 they set up within the Navy Department a Bureau of Budgets and Reports to coordinate among other things the development of sound programs of end-item requirements, scheduling procedures, and methods of calculating material requirements. During this period definitions were unclear. There was no clearness, no clean lines. Methods of calculation were in a formative stage, and to a large extent the stated requirements of the Navy were more or less guesstimates made by experienced personnel with good judgment. It soon became apparent that more realistic and more accurate estimates were required.

In the summer of 1942 the War Production Board consulted with the Navy. As a result the Navy agreed to collect bills of material from navy yards and private contractors and that these would be used as a basis on which to estimate the Navy's requirements. Those bills of materials

covered fourteen items—lead, tin, steel, cadmium, and so on. They also covered lead-times. It was the first time we had any real bills on which we could base any realistic concept of our requirements.

It turned out that those bills of materials did not work for the purposes for which we later needed them, but they were very useful and very helpful in the early days. They did not work for the Controlled Materials Plan, for reasons that were quite obvious.

As time went on, priorities began to lose their effectiveness because of ballooning and inflation. Everybody had to be in a class above where he was. You remember the A-1, 2, 3, 4, 5, and so on. Then everybody got up into A-1-A, A-1-B, and so forth. Then we went into the double A system. I am surprised we didn't get into the triple A and quadruple A system before we got through. Fortunately, CMP came along, and we were able to avoid that. In any priorities system, if you work with priorities alone, you run inevitably into that kind of ballooning of priorities.

As priorities began to lose their effectiveness through inflation, shortages began to multiply in size and scope and individual munitions programs began to be increasingly retarded through lack of odd bits and pieces, like propellers and shafts. The need of the Services for more positive assurances that their programs were going to be met month by month became clearer.

We tried all sorts of things. We tried PRP, for example, on metals. PRP came in and went out pretty fast. Then CMP came in. That, as you all know, was a vertical allocation plan whereby the individual claimant agency took its allotment and passed it down to the contractors in turn, from primes to subs all the way down.

CMP made possible a more accurate appraisal of feasibility and of relative essentiality, and consequently a more equitable and effective distribution of materials. It forced the claimant agencies, no matter whether it was the War Department, the Petroleum Administration for War, the railroads, the Maritime Commission, or whatever it was, to cut their coats to fit their cloth. Within the agencies it forced the departments to actually adjust their delivery schedules to the materials that they were going to have. CMP continued through ten quarterly periods and it did its job well.

In addition to balancing production programs and preventing overproduction or underproduction of components, CMP made it possible for the military to make adjustments in their over-all programs with the confidence that these adjustments would be carried out promptly at all levels of production. In other words, you could cut destroyer escorts down radically

pass out the word to the primes that you were going to cut that down; and in a very short period of time, almost as fast as with the primes, word went all the way down to the subs and from the subs back to their demand on resources and their use of facilities for that particular program. Therefore at the same time that you cut down on tanks and destroyer escorts you could increase a program for landing craft or for heavy artillery or whatever it might be and know that you were going to have the materials you needed to go into the new program. That in turn would begin to flow through to the subs and the sub-subs as well as the primes. We got that absolutely essential flexibility in a changing war, where conditions and requirements were changing rapidly. CMP proved that that was possible. CMP did work well in that.

The reason CMP worked as well as it did is a tribute to the sincere, hard-working, understanding cooperation between the Armed Services, the other war agencies, and industry. Everybody got together on that terrifically complex job and did their best to make it work. That is the reason it worked.

The Navy as one of the major claimant agencies was required to state its estimates of requirements for controlled materials, and for certain products, to the WPB Requirements Committee each quarter. Following the determinations made by the Requirements Committee, the Navy had to take what it got and spread it among the bureaus and they in turn had to spread it among the programs then go to work.

They set up in the Navy in what was called the Office of Procurement and Material in the Under Secretary's Office a position called the Navy Material Control Officer. They said that it was up to him and his office to work with the WPB, the Requirements Committee, the Program Adjustment Committee, and all the host of these other bureaucratic committees that we had over there. Their duty was to present to these agencies the Navy's claims, fight for them get the best they could, get back again with whatever they would give them, and distribute it equitably throughout the bureaus and the Services.

Therefore the policy and the outside fight was in the Under Secretary's Office, and the regular routine of CMP operations was delegated to the bureaus, which were made responsible for estimating their material requirements and allotting materials to prime contractors for their scheduled production programs.

At the very beginning of CMP in the Navy CMP was a mysterious, complicated document that none of us understood very well. And yet we were going to have to live under it. We were going to have to live under it and understand it thoroughly if we were going to get our fair share of

whatever it was we needed to carry on the program. So in order to do that, the Navy Material Control Officer set up an advisory committee, a representative from every bureau. It had the strongest officer that the bureau chief would give. He asked for the strongest man the chief would give them to sit on that committee and asked that he give that strong man adequate authority to speak for his bureau.

That committee served all through CMP. Each member of the committee handled CMP within his own bureau, within all the interrelated segments of his own bureau. They met together every day or every other day. They discussed their CMP problems as they came up. They argued them back and forth, thought about every angle as they went forward, and developed the Navy's policy around the table.

Once Navy policy was determined around the table, the Navy Material Control Officer followed that policy in his contacts with outside agencies. But every bureau in the Navy, including the Marines and the Coast Guard, had its share in the development of Navy policy and had the opportunity to say its say without any possible chance of not getting fair play. And, believe me, the interests of the different bureaus of the Navy, as in the Army, are often conflicting. The success of CMP in the Navy was due to that committee, that group, that task force of strong men.

The Bureaus were made responsible for developing and maintaining balanced schedules for all procurement programs realistically based upon strategic plans and directives as these were limited by facilities and manpower. These programs included both end products and components, which necessarily were to be balanced, so that complete items could be delivered without delay suffered from late component delivery or without the accumulation of inventories of components delivered in advance of proper lead-time. The Bureaus based their procurement programs and the resultant estimates of requirements on the Monthly Status Report, which was the basic document containing all important phases of the Navy's procurement program and their current status.

The Bureaus were made responsible for determining their requirements of controlled materials each quarter for a twelve-month period in advance. This included the controlled material requirements for the material bought as such, plus the quantities needed to manufacture Class A and special Navy products. These were broken down in terms of the materials and products, and broken down in turn for each Navy program. An additional estimate was required of each bureau's Class B product requirements in dollars or units as stated by WPB.

The material requirements for Class A products were obtained from bills of material or engineering estimates applied to the procurement schedules, the more important of which were recorded in the Monthly Status Report.

RESTRICTED

Some of the bills of material on hand in the bureaus were adequate. I told you back earlier that in this deal with the WPB the Navy had gone to the contractors and asked for bills of material. These didn't turn out to be accurate, and the Navy had to go back with clearer definitions, clearer instructions, and come up with requests for bills that brought them pretty close to reality as to exactly what was needed in end product production at any level as we went along the line.

Upon receipt of the bureaus' requirements for controlled materials and Class B products, the Material Control Office carefully reviewed them, checked them, and analyzed them. They called in the bureau material people, the bureau material control officers, and said, "Why do you need this much for your program? You didn't need this much last month. Your estimate last month was way off from what it is this month. What is the reason for this? In other words, demonstrate the validity of your claim, not caringly, not naggingly; but let us get the facts out, so we ourselves know exactly where we are going when we get up before the War Production Board." When it was something unclear or vague or difficult, we reduced it to writing, so that by the time we did go to the War Production Board we had a clear story to tell, convincing to us at least, and we hoped it would be convincing when we presented it to the War Production Board. As I say, that analysis, that checking, was done within the Central Material Control Office, and it was done in conjunction with and in consultation with the people who actually prepared the estimates. We didn't desire to do anything other than to make the thing realistic and make it sound.

Upon receipt of a total Navy allotment from the WPB Requirements Committee, the Navy Material Control Officer, in conjunction with the bureaus, recommended specific allotments to the bureaus. These were taken by the chief of the Office of Procurement and Material to the Vice Chief of Naval Operations, who, if he approved them, made the allotments.

As I said, this task force of Bureau Material Control officers worked beautifully, because they were all strong people. They were strong and they were mentally tough. They were violently partisan for their own bureaus and their own programs. They fought their damndest to get their fair share. What they thought was their fair share was usually a lot more than they could get, but they fought for it. But they were good humored, they were understanding, and they were tolerant. We were always able in that group to work out a division at that level that was satisfactory to the bureaus. We never had to go to higher authority to get something settled for us. That demonstrates the complete cooperation and the sincere desire to understand the problem and do the best thing for the Navy. Because of that we were able to get along and get our job done and work with the materials that we had in hand.

It was no easy task to reconcile these conflicting claims within the Services or within the whole economy as between the Services and other Claimants. We had to sweat blood to get it done. A great many claims could not

RESTRICTED

be demonstrated factually, as to why this was absolutely essential and this was not. There was a great deal of haziness and overlapping. Good judgment played an important part. But it was demonstrated during the war that it could be done between claimant agencies, in the Services, and between the department within the Services.

It is going to be no easy task in the future, as we move forward, to keep these current, up-to-date, realistic, and reasonable estimates of your requirements reasonable and realistic. It is going to be no easy task at all. But, again, it is one that is necessary. Everywhere in the Services, on these claims, on these estimates, as we move forward, the water must be squeezed out of them before they get up to the next echelon. If you don't squeeze it out, they are going to squeeze it out, because there are a lot of doubting Thomases who are going to look over these programs and look over the materials that are required for them.

Once the estimates are prepared and once the allocations are received, obviously you must adjust yourselves to whatever you get, and do it without rancor, without heat. It can be done. It was done. It can be done again and must be done if we are going to do our material job adequately and well, both in peace and in the emergency when it arises.

You gentlemen in your studies have the job of developing mechanisms, ways and means, for making these determinations, these estimates, clear, of making definitions, of laying out ways so that you know that what you are asking for is within the bounds of realism. If we can do that, and as long as we can do that, the Services can be proud of their material people and the country can be proud of them, because that share of our preparation work for security will have been done and done well. As I said in the beginning, your job is a challenging job. When you get out to the Services, you are going to sweat over it and struggle over it and argue over it. It is a job that will challenge your thinking. On it depends a great deal of our security and our chances of victory in the future. God speed you in your work. Thank you.

QUESTION: Can you give us any examples of some of these definitions that had to be clarified for determining material requirements?

MR. SMALL: Surely. Contractors making propeller shafts or carburetors or things like that wanted to know: "Do you include the raw weight of material, or do you include the finished weight of the material going into products?" That is just one of the things that were unclear. Obviously the demand on our resources for steel is the total steel and not the finished steel. It includes what is lost in grinding and what is lost in machining. There are countless other instances of that kind. That is one of them.

QUESTIONS: You suggest one committee that worked very well. I have a feeling that there were many committees concern d with materials during the war that did not work so well. What is your opinion under the new integrated plan for committee action within the Services and between the Services? I refer to civilian needs, civilian agencies.

MR. SMALL: Within the Navy during the war we had this task force of Bureau Material Control officers. That would be comparable in the Army to having a task force of material officers in each segment of the Army that needs one. I am not too clear how Service unification right now is working, but I assume that that same concept is going to hold, for the time being at least.

The Navy will develop its requirements, probably through some such task force. The Army will develop its requirements, probably through some such task force. The Coast Guard and the Marines, the Air Force, and the others will do the same. Once those are accumlated and screened and the Service itself believes that the requirements are honest and reasonable and fair both in quantity and time, then I assume that the joined Services will have their chief material control officers get together and again go over them and try to correlate them and make a united demand on the allocating authority for the Armed Services' share. That is the same kind of committee, with the same kind of understanding, give and take, and flexibility as between them. And it will work.

Then they go up before the allotting authority. Who is the allotting authority going to be? It will be no doubt something like the Requirements Committee that we had in the War Production Board, where all claimants present their claims. They will present them at two echelons. In the WPB they had a Production Adjustment Committee and a Requirements Committee. The first one analyzed the claim and pushed it up to the top board for recommendation.

I think the Requirements Committee setup worked pretty well during the war. Those people were honest, they were sincere, they were objective. They were trying to win the war just as hard as the men in uniform were trying to win it. I sat on both sides. I was in uniform for a while and sat in front of the board, and I was for a while part of that organization. I am sure they tried to be objective, realistic, and fair. As a result of that we did move forward and in the latter part of the war all agencies were getting pretty much what they needed to get the job done.

It was not as much as any one of them would like to have had. Many demands came in that could not possibly be met. For example, the Petroleum Administration for War needed more pipe. Surely they needed it. There was no question about that. But if they got it, one of our big programs of the Armed Services was going to give way. But they were able to

flex and readjust so that we all get along pretty well. I can't see that the present setup as we move forward will be any more difficult than it was.

We did get it to working well. I guess there were three reasons for that. One was that the people who were involved were trying to do an honest and sincere job and not be swayed politically or in any other way. Second, the claimants for the most part were coming up with honest estimates, as honest as they knew how to make them. They were not padding them, thinking they were going to get cut down. They were putting in what they actually felt they had to have. That enabled the allotting authority to say, "we can't do all of this. We have to cut off this much," leaving it up to the claimants to cut down on what they could best afford to cut down. It was flexible. It worked out smoothly.

I am talking now about the major things, like steel, copper, and aluminum. On some other things we had very great difficulty, and always will have, because of the complexity of the particular problems, forest products and textiles, for example. But to show you the way in which these things can be worked out I will give you an illustration.

After the war the newspaper publishers of this country were violently against the War Production Board or the CPA retaining an inventory control over newsprint. For some reason or other that was considered to be an infringement on free speech. It was not really, because what we were trying to do was to hold down the inventories so the big papers could not take it all away from the little papers; so that everybody would have a chance. I got word that they were going to have a meeting, the first annual meeting; and they were going to pin my hide up on the wall—I was going to be called the enemy of American free speech because I wanted this inventory control.

We had an advisory committee of newspaper publishers. Some of the toughest publishers in the country were on that advisory committee. They were independent people if anybody ever was. And so I figured out what I had better do. I called a meeting of the advisory committee the afternoon before their annual meeting. I think it was the first meeting of that advisory committee where everybody attended. There were about twenty members and they were all there, loaded for bear.

I sat down with the committee and said that I had heard what they were going to do, that I understood their motives, understood their reasons, I was sympathetic with them, but that I had certain problems of my own. I said, "Gentlemen, as you sit around this table you are no longer newspaper publishers. You are officers of our government while you are at this table. Your decisions, your thoughts, at this table must

be for your country and not for personal, selfish advantages for your newspapers. I am going to do something that I never did before. Under the law the head of the agency makes these decisions, but today I am going to take a vote of this committee, and whatever you vote, that is the way I am going to decide this. Now, here are the reasons why I don't want to lift this inventory control, and you as officers of the Government tell me what you think."

They were good citizens - honest, sincere, patriotic - and they voted to hold on to the inventory control. It is that way everywhere throughout our economy, people will do the right thing for their country once they know the facts. If you are fair and honest with people, they will play ball with you.

QUESTION: My question is along the same line, on civilian requirements. It is my understanding that the civilian requirements never were figured out to any degree of accuracy or any degree of usefulness. I am wondering whether it is possible during peacetime under this new National Security Resources Board to attack the problem from the other end, in other words, figure out the economic requirements, the civilian requirements, for an all-out effort, and take the balance, the residue—call it what you may—and use that as the working basis for figuring out what we can do from the military point of view.

You spoke about Ordnance calling for all the copper that all the Allies and this country could produce. I don't know anything about this, but I think if they had known how much copper they could get, they might have gone into substitutes and made plans for increasing the capacity or something like that. I am wondering whether there is any possibility of changing the pattern and working from the basis of the civilian requirements in the economy and from there on out.

MR. SMALL: I am, of course, a military man, but I have also had experience on the other side. I think it is absolutely impossible to attack it from the other direction. You have millions of different things under that concept for which you would have to determine requirements. A tremendous number of them are substitutes one for the other, or alternatives one for the other. It would involve a mass of paper work and computation that is just beyond belief. You would be overwhelmed with it, and you would come out with nothing. You would come up with no real answers.

On the other hand, the Services—and when I say "the Services" I am talking of the war claimants as against the non-war claimants—plus certain other segregated areas, like power, transportation, schools, MWO, which is always a difficult thing, nuts and bolts, which go all through

the economy, have to have some of everything, particularly for an all-out effort. These things can be determined with far more accuracy, far more realisticness, than can those others.

Now, I have no doubt that when the estimates come up for another emergency, those estimates will be for what are called essential things. But who is going to determine what is essential and what is not? I know I used to be so mad at PRP, for example, when they wanted so many tons of steel for bobby pins. I said, "Let them do without bobby pins. We need all this steel." But they yowled, "We must have them for those women who are working in war plants. They need bobby pins to keep their hair up." They also needed them for women who were not working in war plants. Everything has some degree of essentiality. I believe that the system we followed before will work again.

Now, I would say that these civilian requirements were not in many cases determined with any accuracy during the late unpleasant episode. Yes, you are right on a great many things—on bobby pins, on safety pins, on baby diapers, on a lot of things that we can think of. The civilian requirements people were always just screaming their heads off because they were not getting a fair break, and they were right in a great many cases. In a great many cases they were being squeezed too hard.

But on the broad over-all requirements the civilians got along pretty well. They can be squeezed more than they were squeezed before and we can still keep a healthy economy. But to do it, to do it convincingly, and to do it without creating chaos throughout the country, I believe we should attack it from this end and not from the civilian requirements end as you suggested. Remember that the people—and I mean this in complete sincerity—will take any necessary hardship, but they will buck like mules at anything they thing is arbitrary or is unnecessary or just whimsical on our part. And we did a lot of whimsical things.

QUESTION: We have discussed civilian requirements and requirements for the Armed Forces, but we have not discussed one other and that is lend-lease. Can you think of any way we can figure out the requirements for lend-lease in advance?

MR. SMALL: If I knew a good way to do that, they would probably want me down here on this Marshall Plan business. What we term lend-lease, which means the requirements of our allies, I consider as a part of the Armed Services requirements. That is just one segment of the Armed Services Requirements. After all, they are the ones who come up with those estimates. They are screening them. They will have to do it much more closely this time to get what the Armed Services need. But I would rather have it that way than any other.

When I was over on the War Production Board I used to keep at my left hand a crystal ball. I would take a look into the thing every day or so. But it got broken at the outset and wouldn't work after a couple of weeks. So on these things you are just going to have to dig into them and sweat through them. You can't do any crystal balling.

QUESTION: I have two questions. First, would you mind defining a little more accurately what is included in civilian requirements? Are the indirect military items for war plants included? Second, do you consider that by the end of the war the methods and the organization for determining civilian requirements were adequate? If not, would you indicate how they could be enlarged or taken care of?

MR. SMALL: Well, to use the nomenclature we used in the Requirements Committee and in CMP, Class A products—you know what they were—things that the Armed Services procured in their primary programs. Class B were more or less common products, like nuts and bolts.

QUESTION: And typewriters?

MR. SMALL: As I recall, typewriters were Class B products. Nuts and bolts were typical Class B products. Remember, I have been away from there a year and I don't remember exactly what was or was not on the list. But your Class B products were essential common components of that kind. It was just too difficult to try to figure out a bill of materials and include all these small fractional horsepower motors or this gadget and that gadget that went into a machine or a munitions item of ours. It was much easier to do it on an industry-wide basis, because we knew where these things were going. They were going on priorities, or on schedules, and we knew where they were going. They were not going to nonessential purposes. So on them we could afford to give the manufacturers the materials they needed.

The essential civilian requirements over and above that kind of thing were things like bobby pins, waste baskets, and a whole host of things like dish pans that the economy needs to get along. They were held down pretty much to provide the needs of the war. At the time of the Battle of the Bulge we cut the heart out of that stuff. We ran ourselves into a lot of difficulties that we had not anticipated. I would say that as we progressed through the war we learned a lot of things about that area, but it was foggy and probably it is always going to be very foggy and hazy.

I know what we are going to have to do is to give the civilian economy enough to keep it healthy and strong, whatever is thought fair to give it when you look at the whole picture for the next quarter and determine that the Services need so much and the essential economy needs so much. Then there is still so much that the economy can afford to give

these fellows and also in addition have a little reserve to throw out whenever we run into a jam servicewise or civilianwise.

I wouldn't be too disturbed or get off beam too much on this civilian requirements thing, because during the next emergency the civilian requirements are probably going to have to be cut awfully far down compared to what we did this last time. But even so, we are still going to have to give them some bobby pins, some safety pins for diapers, some of this, some of that, and some of the other thing. We are just going to have to do it. I am not sure if I made clear what I am driving at.

QUESTION; You mentioned three things—military requirements, civilian requirements, and the general economy. What I am trying to get straight is that general economy. What category does that fall into? Is that part of civilian requirements or military requirements?

MR. SMALL: What I called the general economy is the essential economy, like railroads and public utilities. They are good examples. Also your bus lines, your street car lines, and things of that kind, which we know are essential to keep the wheels going. MRO for industry is another. Maintenance and repair—the operating supply, maintenance and repair of buildings, homes, repair of roofs that burn out, and various other things that are clearly essential to the civilian economy. Over on the other end are what the civilians require which are other than strictly essential or which can be squeezed—neckties, furniture, advertising signs, etc.

QUESTION: ODT, for example, looked out for transportation. How about your general economy? Was every one of those needs looked out for by some specific agency?

MR. SMALL: All of the big ones fell under some particular cognizance. For example, ODT handled the railroads. The office of the Petroleum Administration for war handled the oil wells, the oil end of it. The Office of War Utilities, which was a division within the War Production Board, handled the public utilities. The major segments were handled by specific people. The rest of them we tried to allocate to various specific people to handle. They were not always handled as well. But when it came over in the so-called Office of Civilian Requirements, they had all of the rest of the strictly civilian items, and there was always an argument as to whether each item was essential or not.

"Is this essential? Is that essential?" One of them was work clothes. Surely, it is essential. Certainly! We must get work clothes if we are going to have plants running. If we are going to have the farmers working or the workmen working, we must have work clothes. So they did have some essential things there.

In one way or another every single thing in the economy was put into one of these pigeon holes. Some of them were handled well. Others were handled not so well, because it was impossible to handle them except by guess or estimates.

QUESTION: Assuming that there was a certain amount of stumbling around in the beginning, would you comment on some of the methods used by the Services for determining the requirements originally that had to be discarded and supplanted with better ones?

MR. SMALL: I can tell you the Navy's side. In ships we had what we called the three echelon system. First let me go back again to what I said to you earlier. The first one was that we in the Navy thought—and I suppose the Army thought the same—that we could get anything we needed; that it didn't matter; there was enough to go around, that we had more reserve than we needed to handle everything; that once the military got theirs, there would be ample left to take care of everybody. That did not turn out to be true. Copper was a typical example. We never did have enough copper in the early part of the war. To us our first step was, "Well, let us order whatever the appropriations say we can order." That was the first method of attack. That did not work at all.

The second method of attack was to try to make it more realistic and more accurate by a method of scheduling of end products. As I say, in the Navy we had three echelons. Echelon one was so many battleships, cruisers, and destroyer escorts. Echelon two was so many guns for each battleship, so many turbines for each destroyer, so many of this, that, and the other. Echelon three was the amount of materials going into these other two echelons. We got bills of material from navy yards and from contractors. That was the first thing on which we had to estimate our requirements.

That was the first time we ever had any realism in the estimates. But that didn't work, because the fellow who was making turbines for us was probably making turbines for some other service or some other segment of industry, and he was using certain materials or common components like nuts or bolts out of a common bin, and the question was, "How much is the Navy going to get out of that pool?" Would the Navy be shorted? Was the Army to be shorted? Were the utilities to be shorted, or something else? He was dragging these things out of pigeon holes or bins for many of the common parts that went into these products.

That is the reason we went through all these gyrations. That is the reason we went back and said, "Exclude these things that are common components, these B products." We wanted to come up with requirements for

only what was called the A list, the A products, that is, things that only the Navy used, like hulls, shafts, guns, and so on, plus a list of things we called "Special Navy products."

So we went through all these gyrations always trying to get an estimate of so many tons of steel, copper, or whatever it was, that we could pass down our chain and that would be adequate for our needs, knowing that our fellows at least would come up with the finished products at the end if we could pass enough on to the subcontractors.

Now, in a constantly fluid production scheme, which is what we always have in war—it is never static—we can't write a book and turn to paragraph number so-and-so and have it true all through the war. No question about that—we have to be flexible and adjustable. The Navy never got enough steel, I must say. The Army always got the steel. We would come up and we would get so much steel. We would pass it out to the bureaus. The bureaus would pass it on down the line to the contractors. The contractors would pass it to the subs and so on.

We never used all that steel. Some of it disappeared into thin air. Some of it was returned to us too late to get to the mills schedules. Some of it always disappeared and so we had to over-allocate so that the mill schedules would be filled. That meant that sometimes the mill schedules would be overfilled by ten or fifteen or twenty days. But nevertheless we kept the mills running.

But we were always headed toward more realism, toward more accuracy, in point of quantity and time, so as to leave more resources available for the other things that were essential, and so as to reduce the hardships, if any, on the rest of the economy or to permit us to do things we knew we ought to do but for which we didn't think we had enough materials.

One of the great problems that kept constantly recurring during the war, one that particularly applies to the Army, was the system of reserves. We had so much up at the front lines, some just behind the front lines. We had another reserve just behind that. We had another reserve over at the ports, and another reserve back here. Then we had a central reserve.

Well, take a case like the Anzio Beachhead, where they used such-and-such kind of shell at a terrific rate for some weeks. If we multiply that rate by all the reserves and bring a requirement back into the plants for production for the Army on that scale of issue, we would clean out the country and we wouldn't have anything left. We have to use some common sense in these things. In estimating requirements we can't take just what is actually happening in a narrow front. We must take it over all, so

that we don't put overloads back here to produce things that we cannot dispose of.

That is one reason we have so much surplus of war materials. Some of these things were overestimated. We made things for the Navy and for the Army which they did not need, but which we and they thought they needed. Other things that they needed and that we should have made we didn't make, but we could have made if these estimates had been more realistic.

COLONEL CLABAUGH: With reference to the export requirements you say the lend-lease requirements are considered as military. What about civilian lend-lease? And, more important than that, can you tell us how to determine the requirements of neutrals for which we made commitments and with whom we had trade agreements? How were they channeled during the war?

MR. SMALL: We had an organization that handled that. It is now in the Department of Commerce. It is now called the Department of Foreign Trade and Commerce. I presume that in the next emergency, if it arises, they will figure the requirements of those neutrals or nonmilitary claimant agencies for nonmilitary needs.

There was always throughout the war a suspicion of those claims on the part of the military and on the part of most of us. We probably screened them more rigidly than anything else. They were presented by the Foreign Economic Administration. They were severely screened.

We must recognize that we not only have to keep our own economy running, but have to provide those things that the rest of our allies depend on us for. We must see to it that they get those things that will keep their economy running. I will give you one example. We must keep the railroads down in Chile running or we are not going to get copper from Chile. We must keep the Venezuela oil fields running or we are not going to get oil from Venezuela. I could go over hundreds of comparable items. But there are certain real things we must do for these countries where they are dependent on us exclusively for these things.

And so these countries really have a valid claim on us. But it is subject to scrutiny, and very close scrutiny. I presume that during the next war we will have a much closer check on what is going on in such countries, to be sure the stuff is not being diverted to what we call non-essential uses.

QUESTION: Do you think it is essential that we have a civilian planning agency currently working with our military requirements people

which can intelligently review and act on civilian claims in the same manner that the WPB did the military claims?

MR. SMALL: By all manner of means we must have a civilian agency today that is making estimates of the total needs of the country. By all manner of means part of those total needs the Service needs, must be accumulated by the Services. As for the other end, the accumulation of the civilian requirements, it is for that civilian and the over-all matching civilian agency to do. I thought we had it. We certainly recommended to the President that we do that, and I think it is in the legislation. It is the National Security Resources Board, the chairman of which was here this morning. He is supposed to do that job.

If there is one thing that I have learned—and I am a military man, spent a great many years in the Service, and spent some time in business as well and in the Government as well—it is that we would be making the gravest mistake in our lives as service people if we think that that civilian agency can be dominated by the military. It must be civilian. There has always been a very real feeling in this country that they will not permit the military to dominate the civilian economy in peace or war.

We had a good plan before the late war. It went into the waste basket. Why did it go into the waste basket? Why didn't we use it? Because there was a suspicion all through the country that the plan meant military domination and they were going to have no part of it. They won't use a military dominated plan the next time either, you can be sure. If any moves are made in that direction, we are doing our national security more harm by grasping at the unattainable than any possible good that can come of it. I think that is one of the things we must face with complete reality—that this country will not tolerate military domination of our civilian economy.

COLONEL NEIS: Commodore Small, while we were casting around for a method of allocating materials before the Controlled Materials Plan was adopted, as I recall, you advocated a plan known as the Materials Warrants Plan. Many of us were greatly impressed with that. As we saw the operation of the Controlled Materials Plan, many of us felt that maybe, had the war continued for a longer period, something similar to your Materials Warrants Plan would have been more appropriate. Would you for the benefit of the class just briefly outline that plan so that we might have an ace in the hole in another emergency?

MR. SMALL: The Warrant Plan, so-called, was an idea back of the very early part of the war, before we had PRP and before we had CMP or any of these things. It said in essence that we have a bank account of rubber, of copper, of steel, or whatever it was. We will give the Navy

a check and the Army a bank account and they will pass out checks or warrants against that bank account, and so on down the contract chain.

Actually CMP turned out to be much the same. I think that the system that I was advocating at that time was a tighter control, enabling us to handle things with more surety that the materials that we had as the Navy would not be diverted into the Army or anywhere else. Actually CMP at the tail end was beginning to be the Warrant Plan.

I think if you people would study it very carefully and study the records of what happened, not in just the three materials, copper, steel, and aluminum, but study the variations that we had to go into on forest products, on leather, on various things, you would see that an improved and refined and simplified CMP could be developed that would be just as effective as the Warrant Plan was originally intended to be, and perhaps more so, because industry is accustomed to CMP now and they are accustomed to its mechanics.

One thing I would like to recommend very strongly about any plan is that, whatever you do, for God's sake make it simple. Get away from a whole host of pieces of paper that don't mean anything. We were plagued all during this war with people wanting pieces of paper filled out. Industry went nuts. They got fed up with it. They finally ignored it or made them up so that they didn't mean anything.

What do you get out of such a system? You get a lot of stuff that doesn't mean a thing. We spent the time of thousands of people on that. What do you come up with? You come up with just a phantom. Strive for simplicity! Strive for clarity!

Another point is that we don't have to control everything with minuteness. We can control a very few things with minuteness and the other things in a broader and easier and more general fashion and still accomplish the same result. For example, it is not quite possible to control the whole economy with steel, but it is almost possible.

QUESTION: In the early days of WPB it took a long time to get organized. What would be your best idea as to the plan we should pursue now in order that whatever agency was determined to be needed could begin to organize itself and function immediately so that the materials that people need in those quantities will not be drained off for unnecessary uses?

MR. SMALL: That is a very good question, and one that I could probably talk on for three or four days. If I understand the present setup, this National Security Resources Board is supposed to be an embryo war

RESTRICTED

Production Board, an embryo over-all authority. I have just received within the last few days some papers from the ANMB, which I have gone over once, and I am frankly puzzled. I am not sure what they are driving at. They are talking about another office called the Office of National Mobilization. This is confidential; at least, the letter said it was.

GENERAL McKINLEY: You mean the new plan?

MR. SMALL: I just got this one yesterday.

GENERAL McKINLEY: In two volumes?

MR. SMALL: That is another one. I got the two-volume one about a week ago. I certainly have not had time to study them with any thoroughness.

I was talking with the General before this meeting and I said I would be sure to say something indiscreet. So here it is. One of our great troubles during this past war was that we had a tricycle and the WPB was running only one wheel. That won't work. Whatever agency we have must run all three wheels of this tricycle or we are not going to move forward fast.

Let us assume that the National Security Resources Board, or you can call it what you wish—the Office of National Mobilization—is the agency which is going to be the over-all agency controlling the war activities. That agency has to have the best data at its command on your requirements and on the other fellow's requirements of resources. It must have constantly up-to-date, prepared, laws, if you like, or regulations as we called them in the War Production Board—L orders, M orders, and so forth—so that we can throw those laws or regulations into industry with one swoop at one time and stop these drains in a hurry and which will permit resources to flow where we need them, in a hurry and without waiting for a lot of new people to come down here and try to work out something new.

We have a lot of material even if we start where we stopped. If we just used that, it would be good enough to start with. It is not really good enough, because we can improve it before the next emergency occurs, in my opinion. I think we have the time for that. But we must be working on it.

I think the National Security Resources Board is the one that should have that part of it completely up to date at all times. I think that is their job and I think they should do it. They should be turning to the Services for the Services' demand on these total resources, whatever

RESTRICTED

they may be, whether they are steel, or cutting diamonds, or platinum or whatever it is. They should know at all times what the Services' demand is going to be for whatever we have and what the other demands will be and know whether we are short or over.

We have the mechanics for that. The thing is already laid out in rough outline. It has been discussed and rediscussed and written down. I just can't understand why we can't move forward along that line. If we don't do it, if we pull and haul and try to muddle the whole thing up, we are going to have exactly the same thing happen next time as happened last time. They are going to call some fellow down here and put him in charge and tell him, "You are it." He is going to go ahead and try to develop something overnight. We are going to go right over the same merry-go-round of improvising again. We don't have to do that. We can have this whole pattern laid out ahead of time.

GENERAL McKINLEY: Our time is running out. You have been so generous answering all these questions that I have let them impose on you longer than usual. I want to thank you for your splendid talk here this morning.

(24 November 1947-450) S.