

PRODUCTION REQUIREMENTS PLAN AND CONTROLLED MATERIALS PLAN
20 February 1946.

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PRODUCTION REQUIREMENTS PLAN AND CONTROLLED MATERIALS PLAN.
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LIEUT. COLONEL GALLAGHER:

In any all-out war effort, the control of materials is one of the greatest problems with which a nation is faced. During World War II that problem was handled by priorities in various ways. Last week we were fortunate in having a lecture by Colonel Hutchinson, who gave us the background of the Preference Rating System, its antecedents and how it operated in the early days of the war and throughout the war. He indicated that it was but a part of the controls that were exercised. This morning his discussion will be continued by a talk upon P.R.P., Production Requirements Plan and C.M.P., Controlled Materials Plan.

We are extremely fortunate this morning in having with us a man who is a recognized national consulting engineer; a graduate of M.I.T.; a man whose business experience is one record of successes and whose Army career over several years is studded with one brilliant achievement after another. He spent several years with Army Service Forces and its predecessor organizations. During virtually all of that time he was engaged on phases of priorities work and particularly concerned himself with P.R.P. and C.M.P. After his duties were finished there, he was sent to Germany where he spent many months helping General Clay and others to determine the war potential, or what industries in Germany should be eliminated so that its war potential might be eliminated. Subsequently, he returned to this country and has returned to civil life.

It is an honor and a privilege to present to you Colonel Maurice Scharff. I might say to those of you who have been asking questions about C.M.P. and P.R.P., Colonel Scharff is the recognized authority. I hope I am not divulging state secrets when I tell you that he helped write P.R.P. and not only helped to write C.M.P. but helped to rewrite it on two different occasions.

Gentlemen, Colonel Scharff.

MR. M. R. SCHARFF:

Gentlemen, after that very flattering introduction, in which I had difficulty at times recognizing myself, I feel that I ought to start off with an apology. It is true that I headed the War Department's Production Requirements Program Section when that Plan was first instituted in the War Production Board early in 1942, and led a group of intrepid officers to Temporary Building E where we struggled with the difficulties of that early attempt at war-time controls; that I did have a small part in the early consideration of C.M.P. and its revision from time to time; as well as representing the Army in the Program Adjustment Committee and, from time to time, in the Requirements Committee of the War Production Board in connection with the quarterly

C.M.P. allotments which became one of the principal and most important activities of those groups.

As a result, in 1943, or in 1944, I might have given you a very clear, convincing and intimate exposition of these control plans and could have readily answered all of the questions that you might have propounded. After the lapse of time that has intervened, however, and my absorption in other activities, very widely separated from these early control activities, I have had great difficulty in searching my recollection and attempting to recover even a small part of that former familiarity.

In thinking what I might say about P.R.P. and C.M.P., it seemed to me that there would be no value in attempting to present to you any detailed account of the forms, rules and regulations and the procedures that related to those two complicated control systems. For one thing, as I have already indicated, I have forgotten most of that detail. For another thing, there would not be time. I have been admonished to limit my remarks so there may be opportunity for questions and discussion. My recollection is that when each of these control plans was instituted for general application - the P.R.P. system in June 1942 and the C.M.P. system in November 1942 - our instructions started with a series of three-hour lectures on each of them. They were none too long to cover the elaborate arrangements that were applicable to them but, in addition, it seems to me it would be useless to go over all of that old detail. If I can bring you anything of interest or value at all, it should be some understanding of the purposes that were sought through these controls, the results that were accomplished, the deficiencies that experience demonstrated and the suggestions in these experiences with respect to possible action in some future emergency. So I would prefer to devote my brief time to the consideration of these more general aspects of the matter with only passing reference to the details with respect to their organization, procedures and operation.

First, to recall the background of these systems and to review ground that has no doubt already been gone over and with which you are familiar:

In 1939, prior to the beginning of the European war, or during the year it began, the United States, according to the figures that have been published, had a gross national product, that is, value of goods and services produced, of about 90 billion dollars. It constructed about $6\frac{1}{4}$ billion dollars worth of new facilities and exported about 3 billion dollars worth of goods. This was the year for the most part of peace, so far as the United States was concerned, and industry operated without any special governmental controls of a type that later became necessary.

In 1940, however, after we had undertaken the beginning of some military production, both for ourselves and for our friends abroad, our gross national product expanded to about 100 billion dollars, construction to about $6\text{-}3/4$ billion and exports to about $4\frac{1}{2}$ billion. To me it has always been an interesting demonstration of the accuracy and

precision with which our competitive price system in peace times normally adjusts our facilities and our material and labor distribution to our requirements. With the relatively small increment of requirements arising out of war-time conditions and perhaps for national defense, difficulties began to be experienced and it became necessary in the summer of 1940 to establish the priorities system for military prime contracts.

In 1941, the gross national product expanded to about 130 billions; construction increased to 10-3/4 billions; exports to about 5 billion. At the end of the year we entered the war. During this period, it became necessary to extend the priorities system beyond military prime contracts and to assign priorities to certain other essential production in order to assure its delivery from being prevented by less essential production. During this period, also, there began to be established the systems of "M" orders, "L" orders covering allocations, conservation, standardization, limitation and prohibition. First, starting with a very small number of materials and products, by laying the groundwork for a system of supplements to the priorities system, it eventually was extended to cover all production and to comprise hundreds of different specific orders and limitations.

During this period, also, the priorities system was developed from a relatively simple A and B priority to a considerable degree of subdivisions. Near the end of the year the A-1 Priority was broken up into A-1-A to A-1-J and already the inflation of priorities was beginning to be visible.

In 1942, with war production getting into swing, the gross national product was expanded to 150 billion. Construction reached a war-time peak of 13 1/2 billion; exports expanded further to 8 billion. The A-1-A band of priorities became so inflated that the Double A series of priorities was brought into play in order to assure recognition of the urgency of the most essential production. During 1942, also, experiments were carried out during the early part of the year with a plan similar to what later became known as P.R.P., or the Production Requirements Plan, and that Plan, itself, was put into effect in the third quarter of 1942. By the end of the year it had become evident that the results would not be satisfactory over a long period. The Controlled Materials Plan was developed. It was announced in November and put into effect in the second quarter of 1943.

In 1943, the gross national product expanded still further to 180 billion; construction dropped off to 7-3/4 billion; exports increased further to 12 1/2 billion. During this year the inflation of the Double A priority bands got underway. C.M.P. was put into effect, developed, modified and toward the end of the year the necessity of supplementing that system by additional controls, particularly with respect to the scheduling of critical components, became clear and the new supplemental procedures relating to scheduling were developed and then, in 1944, gotten into effect along with the manpower controls which by that time had become essential.

In 1944, the gross national product expanded to about 200 billion. Construction fell off to about 4 billion. Exports, including Lend-Lease continued to increase to 14 billion. All of the controls that had been developed in the previous years, excepting P.R.P., which had dropped by the wayside, were continued in effect - priorities, L and M orders, C.M.P., component scheduling, manpower controls - so that we went into 1945 and approached the end of the war with a system which embodied all of the experience that we had had up to that time.

Now I have thought it was worthwhile to review this experience briefly in this way because it has seemed to me to demonstrate that while our competitive price system can adjust our facilities and our distribution of material and manpower to the requirements of our population and our industry, as well as of our military services under peacetime conditions, when our capacity is substantially in excess of the demand, the balance is delicate. As soon as the demand increases under emergency conditions of any kind, the institution of controls is necessary. As long as that excess of capacity over demand remains, the system of preference ratings alone can accomplish reasonably satisfactory results; but, as soon as a substantial excess of demand over supply develops, supplemental controls are inevitably required and these supplemental controls which we tried in the beginning in connection with priorities relating to limitation orders, allocations of critical materials, prohibition of manufacture of certain types of products, standardization and conservation - while all necessary and useful - in time become inadequate.

I feel our experience has demonstrated that we cannot operate controls in war time without a system devoted directly to the control of programs. In other words, the agencies that initiate procurement, both the military agencies, the civilian governmental agencies and the industrial organizations supplying those agencies and supplying the civilian population must be brought under control with respect to their several programs, and limitations must be imposed upon their procurement. The Production Requirements Plan, or P.R.P., was our first effort to exercise program control in addition to the other controls that we had developed.

P.R.P. was a system that applied to all users of \$5,000 per quarter or more of certain specified critical materials which included some 30-odd different metals, in addition to a considerable number of other materials and alloy materials. It has been referred to often as a horizontal system. The application form that was prescribed, of which I have a sample here, was a voluminous document that took on various colors in different quarters, and was submitted by each user over the minimum quantity of these critical materials. One application was submitted for an entire plant or establishment covering all of the requirements of that establishment for all of the products which it turned out. The form required the submission of rather complete information regarding shipments in prior quarters, expected shipments in future quarters, firm orders on hand, ratings attached to those orders, the end uses to which the products were to be put, the inventories of

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the critical materials at the beginning of the period, the expected use of those critical materials and the estimated inventories at the end of the period, with distinctions between the inventories of useable shapes, forms and sizes and those which were not useable in the applicant's productive activities. These forms were processed in the Industries Divisions of the War Production Board. We had Army representatives and Navy representatives in each of those divisions to participate in that processing, to look after our interests and the interests of our military contractors and sub-contractors. The total requirements submitted by the applicants on these applications were tabulated and summarized. The Materials Division attempted to arrive at a conclusion as to the extent to which those requirements could be met and the requirements, after review by the Industries Divisions, were scaled down by the application of percentages which it was believed would bring the total demand for these critical materials or at least for a selected number of these critical materials within the available supplies. The percentages that were used for this purpose in most cases were uniformly applied in each division and to a large extent uniformly applied in all the divisions with departures from those uniform percentages only where special considerations were brought to the attention of the division, such as the specific requirements of the fulfillment of urgently required military contracts.

The first two quarters' experience with the Production Requirements Plan demonstrated that it was not a satisfactory system of program control. There was no way of relating the requirements for critical materials submitted by the individual producers with the requirements of their suppliers; that is, of the producers of components or assemblies which they used in their production, with the result that the Industries Divisions and the Army and Navy representatives in those divisions to a large extent had to go at it blindly. I recall very clearly the impression I had in participating as I did for several months in that activity. We just did not know what we were doing. We did not know when a particular manufacturer's requirement was scaled down by applying a factor of 70 percent or 60 percent. We did not know, and there was no way of telling that that was going to prevent him from delivering an assembly to somebody else who had been scaled down to 90 percent and who could not possibly produce the product because he could not get that particular assembly. The horizontal application of the Production Requirements Plan to the separate applications of the individual producers, notwithstanding that they were grouped by industry divisions and as far as was possible by types of product in the absence of any standard system of product classification at that time, did not permit coordination of product production and sub-assembly and component production. It did not permit effective program control. An effort was started immediately to develop an improved system. That effort was carried out continuously through the second and third quarters of 1942 during which period P.R.P. was being tried, first, on an experimental basis and, second, in the third quarter on a uniformly applicable basis.

In November 1942, the first presentation was made of the Controlled Materials Plan. That Plan was put into effect in the second quarter

of 1943, although there was an over-lap authorized, which was necessary, so that those firms who had made P.R.P. applications in the first quarter of 1943 were permitted to continue to operate in effect under P.R.P. during the second quarter of 1943, if they did not receive sufficient C.M.P. authorizations to permit them to operate under C.M.P.

C.M.P. has a very great advantage as a system of program control to the extent of about 70 to 90 percent for the different materials which were selected for control purposes - steel, copper, copper base, alloys and aluminum. It was a vertical, rather than a horizontal, system. It provided, as you will recall, that all producers of products using any appreciable amounts of these controlled materials would be subject to the Plan and they were prohibited from accepting quantities of these controlled materials, excepting when they had allotments validly issued to them authorizing such acceptance. The products were divided into A products and B products. B products were defined as a list of some 500 types of products made up to a large extent of selected items and items in general civilian and industrial use which it was felt could be better handled through the allotment of controlled materials by the Industries Divisions of the War Production Board on applications from the B product producers than through any system of vertical allocation.

A products were defined in a negative manner as all products not on the B product list. The controlled materials for the A products were allotted to some 12 to 15, at different times, agencies which developed and submitted their programs and their estimates of controlled materials requirements to the Program Adjustment Committee and the Requirements Committee of the War Production Board. In the case of A products the allotments were made vertically, first, by the Requirements Committee to the agencies; second, by the agencies to their prime contractors; third by the prime contractors to their sub-contractors and so on down the line as far as the line ran to A products.

The B product manufacturers submitted their applications for controlled materials to the Industry Divisions of the War Production Board. Those Industry Divisions were represented on the Requirements Committee by the Operations Vice Chairman of the War Production Board who was in effect the claimant for controlled materials for B products. The materials for the B products were allotted by the Requirements Committee to the Operations Vice Chairman, by him to the Industries Divisions of the War Production Board and by them to the B product manufacturers on the C.M.P. applications. I do not want to take the time to go into any of the details of the application forms. Many of you no doubt have seen them. The form was very much condensed and simplified by comparison with the PD-25A that I showed you before. It condensed on the two sides of a single sheet information regarding the products made by the applicant or, rather, the product covered by the application because a separate application was required of each B product manufacturer for each B product he made; his production schedule for a 12 to 18-month period; his purchase schedule for the various types of controlled materials for which he was applying, together with information about his inventories.

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The C.M.P. 4A Form was used by A product manufacturers for estimating their requirements to superior contractors and to claimant agencies and a similar form C.M.P., 4B was used by the B product manufacturers. Similar applications were required from persons responsible for construction projects requiring the use of controlled materials and the regulations covered in great detail the procedure for the establishment of bills of materials for different types of products, the establishment of lead times for relating the requirements for controlled materials to the production schedule for end products. These applications when submitted to the War Production Board were tabulated by types of controlled materials, by agencies, and by programs within those agencies and submitted to the Program Adjustment Committee and, eventually, to the Requirements Committee where they became in time the subject of detailed and careful consideration of all of the programs, the adoption of final decisions, adjusting requirements to supplies so as to assure as far as possible, that a valid allotment could be honored at the mill, and would not become a mere hunting license, which had been true of many of the devices that had been used in the past.

Finally, the regulations prescribed a complete allotment accounting and reporting system so that for compliance purposes the War Production Board was enabled or had, at any rate, the machinery for assuring that the regulations would be complied with; that controlled materials would not be accepted without valid authorized allotments; and that individual consumers would not accept more materials than they are authorized to accept.

One of the features of this Controlled Materials Plan that interested me both during its operation and in my own experiences subsequently in Germany was the extent to which our Controlled Materials Plan resembled in many respects the German Metals Allocation System. I have been told, and I assume it is correct, that to a considerable extent our Controlled Materials Plan was based upon study of the German Allocation System. As I saw some of the operations of the German System in Germany, it seemed to me that that might well be true. The major difference between our system and the German System was that the part which here was played by the Industries Division of the War Production Board with respect to the allotment of materials in those industries that made products in general use by industry and the civilian population, in Germany, in accordance with normal German organization was assigned to the German industrial groups or rings or cartels which, you will recall, were legalized and which every member of an industry was required to join. So that, in addition to the allocations that were made to the military and certain other governmental procuring agencies, allocations were made to these industrial groups or rings or cartels and handled by them within the semi-private organizations under supervision of German governmental officials, but without being strictly governmental, as was true of the War Production Board's Industries Division.

I ran across some evidence that the German experience resembled our own in another respect and that was in an intelligence report on the interrogation of Dr. Funk who had been the Minister of Economics under the

Hitler regime. I tried to find a copy of that in the Pentagon this morning with the idea of reading some of it to you because it interested me and entertained me so much. I was not able to find it but from my recollection the part I thought would be of interest ran something like this:

Dr. Funk said that an allocation meeting, which he described, would be presided over perhaps by Dr. Speer, the Armament Minister. The meeting would start off with a long speech by the Chairman telling everybody that the Fuehrer was not satisfied with the amount of military production and that the country was not doing its best, and that something had to be done to increase all types of armament production. After taking up the consideration of the allotment of some material - let us say for steel - Dr. Speer would say, "I have prepared a proposed allocation of steel to the various agencies and industry groups represented here. This is what I think we can accomplish in order to give the Fuehrer the increased production that he wants." Then he would distribute a schedule. Dr. Funk said as soon as it was distributed the air would be filled with strident cries of anguish from the various agencies who insisted that they could not possibly carry on their activities with the small amount of material that had been proposed to be allotted to them. Then a few agencies would stand up and it would be discovered they had been forgotten entirely. No consideration had been given them whatever! After a long and bitter discussion and after each of the agencies, which already claimed they did not have enough, had been nicked for a small fraction to take care of the ones that had been left out, according to Funk, the Chairman would get up and announce that the following final allocation has been approved. Then, he said, everybody would have a glass of schnapps, and the meeting would adjourn. It reminded me very much of the meetings in the War Production Board; that is, excepting we never got the glass of schnapps.

The Controlled Materials Plan undoubtedly made a great contribution to the success of our war effort. It went further in the direction of program control, which our own experience has demonstrated was absolutely essential, than any of the other plans we had attempted. Actually, many of our control systems, like the priorities system, had no substantial effect on program control, on the limitation of procurement. Some of our limitation and allocation orders and the P.R.P. system were attempts to introduce the element of program control. None of them was successful. The Controlled Materials Plan was our first successful attempt to effect a measure of program control and it was a great contribution to our war effort. It was not a complete success. I think anyone who participated in it would have to agree with that. Although we made constant progress, we never entirely eliminated the inflation of requirements statements with the expectation they would be cut down. We even had the suspicion that some branches of the military service contributed to that from time to time and, also that some of the other agencies did too. We never had entirely satisfactory inventory control and that, by the way, is an experience that was exactly paralleled by the Germans, only they had

much more difficulty than we did. In spite of their dictatorial central government, the violations of the German inventory restrictions as indicated by the inventories that were on hand at the end of the war were much more serious, and undoubtedly created greater conflict with efficient production than was true of inventory inflation in this country.

We never licked the problem of adjusting B product production to the entire programs, although we made great progress. The B product system, of course, was analogous in some ways to P.R.P. It suffered from some of its shortcomings. In the discussions that occurred from time to time about the possibility of the improvement of C.M.P., the Army, as I recall it, was continuously in favor, (and I know I personally was very strongly in favor of it) of the expansion of the A product system of control and curtailment of the B product part of the Plan. I am convinced myself that we never went nearly as far as we could have gone in the simplifying of methods of extending allotments, in expanding the direct vertical control which would have been more effective in program control and more effective in insuring the meeting of programs. There were various proposals made from time to time that went even farther than the expansion of the A product system in the development of C.M.P.

There was one group in WPB, for example, that developed at one time a proposed system of allotment banks which it was intended should operate like the banking system with a currency representing controlled materials that would be passed from hand to hand so that everything would be produced in effect on an A product system under the authorization of allotment currency which would be collected in banks and controlled by a central institution like the Federal Reserve Board.

There was also a group in the Army that advocated at one time a system of dollar program control, a system that I never believed could possibly work and which I think would have tended to break down the effectiveness of C.M.P. as a program control device, but I think it can be said that experience demonstrated that there were these deficiencies to which I have referred, that there are ways of overcoming those deficiencies.

I would like to leave with you the suggestion that while the Controlled Materials Plan made a great contribution to the success of the war effort, there are still great opportunities for the improvement of program control plans in times of emergency and that all of you who have any interest in the subject can make a real contribution by continuing your interest, giving it your study and attempting as you have opportunity to contribute useful suggestions toward that end.

Thank you very much.

LIEUT. COLONEL GALLAGHER:

Colonel Scharff, I know that I speak the thoughts of the Class and Faculty in extending to you our sincere thanks for a very comprehensive, lucid and intelligent exposition of your subject.

I know that the members have questions they would like to ask of you and if you do not mind giving us a little more time we would like to prevail upon you a little further.

MR. SCHARFF:

I will be very glad to try to answer any questions.

A STUDENT:

I would like, if possible, to know, Colonel, how you got around some of the problems in connection with the B products. For instance, early in the war some of the agencies got out of hand. We organized them eventually and were able to match the requirements of everyone who had requirements for heat exchangers, which included the rubber program. Now, as you can well imagine, it was hard to change that whole setup without losing a tremendous amount of production of the A items.

MR. SCHARFF:

There are two comments I would like to make; one of them I should have made before, but I forgot all about it.

The first one is that, as I have pointed out, the usefulness of the C.M.P. procedure in the A product division arises from its value for program control and is affected by the limitations on the use of these particular materials.

Now, in so far as heat exchangers entered, as they did, into the programs of the Army and Navy, and in so far as those programs were limited, as they were from time to time, by the availability of controlled materials to their contractors, the application of the A Product procedure to heat exchanger manufacturers, through the simplification of the allotment extension procedure (which I agree would be necessary in order to expand the A Product procedure) would, it seems to me, have tended to make more effective the limitation and control of those programs which used heat exchangers than was possible with heat exchangers classified simply as a B product.

On the other hand--and this is the second thought I should have included in my discussion--I do not believe that any system of control of selected materials, such as steel, copper, brass, and aluminum, even if it were 100 percent A product procedure, and the allotments were extended vertically, could possibly, by itself, be the sole measure of control.

It seems to me that any such system must necessarily be supplemented by a system of preference ratings which would control those products and which would also provide for the administrators of the program a measure of relative urgency, something that could guide them in the event of conflict. They will have to be supplemented by some type of scheduling. In other words, the program control through material allotment could,

in a way, be described as the gross adjustment that you make with the large screws on an instrument.

There must be scheduling of heat exchangers when capacity is inadequate, in addition to the allotment of materials. So that I did not mean to suggest that the extension of the A Product procedure would eliminate the requirements for these supplemental procedures, which I think our experience has demonstrated were a necessary part of any complete and well-rounded control system.

COLONEL NEIS:

For the benefit of the students who have not had an opportunity to see the interior workings of this plan in Washington, would you mind, Colonel, tracing briefly the procedure by which the subcontractor, through the contractor, through the technical service, through Headquarters, submits his requirements? I think it would be quite interesting to see just how that vertical system works.

MR. SCHARFF:

Well, as I delve into my recollection I could give you perhaps a very brief picture of it from the point of the Army procedure.

Under this system a sub, subcontractor--and it is a fact we, in investigating the chains of contracting, I recall, found in some instances they went through as many as 18 steps, before they got down to the final original order on something that became incorporated into a final end-product.

Of course if, at any point in the chain, his product was a B product he submitted his application to the War Production Board. If he was a B product manufacturer and he had components that were supplied to him, which were themselves A products, he had to get applications from his component manufacturer. But whenever the product or the component was a B product, the manufacturer simply submitted his application to the War Production Board. But as long as the chain led from one A product to another the sub-subcontractor submitted his application to his next superior subcontractor. He, in turn, submitted his to his own next superior, and so on up the chain to the prime contractor.

The prime contractor submitted his application for controlled materials to the Service with which he had his contract. The technical services collected all of the requirements that were submitted to them in that way, or which were estimated by them to the extent they were unable to get any actual submissions. They submitted their requirements, based on the estimates of their contractors, under headings corresponding with the sections of the Army Supply Program, to the Controlled Materials officer who was the Chief of the Controlled Materials Branch of the Production Division of A.S.F.

At that point the Army requirements were consolidated for all of the technical services, and all of the programs into which their several

portions of the Army Supply Program were divided, and the whole Army requirement was submitted in book form to the W.P.B., where it was analyzed by the Program Branch of the Office of the Program Vice Chairman, and presented finally, along with the requirements of the other 13 or 14 claimant agencies, to the Requirements Committee of the War Production Board.

After the Requirements Committee had referred these to the Program Adjustment Committee and to the Industry Divisions of W.P.B. for analysis, study, and recommendation, they came back for final discussion, debate, and action by the Program Vice Chairman, following which the Director of Materiel of the Army was notified of the quantity of controlled materials allotted to him by the War Production Board, along with any recommendations the W.P.B. made with respect to its division between the different programs that had been submitted. He, in turn, turned this over to the C.M.P. control officer who made the allocation among the several technical services, considering among other things the statements of requirements that had been submitted by them, and holding out a reserve, for assignment on application, in order to meet unexpected emergencies.

The technical services then, in turn, through their respective C.M.P. branches, broke down their respective allotments and made allotments to their prime contractors who, in turn, made them to their subcontractors who, in turn, carried them on down the chain to all of the sub-subcontractors making A products. Those allotments were then required to be presented to the mills and warehouses in order to secure delivery.

A STUDENT:

I would like to get your opinion, based on your experience with P.R.P. and C.M.P., as to whether you think it would have been of material advantage to have started C.M.P. approximately a year earlier, at about the time we had P.R.P., in place of going through P.R.P. and then C.M.P.

MR. SCHARFF:

I think undoubtedly it would have been a very great advantage if we could have done it. I would agree that it would have required a much more extensive educational program than eventually was necessary, because the experience with P.R.P. and our other experiments had value in preparing industry, in general, as well as the Military Services and other interested agencies, for the acceptance and application of C.M.P. But I have no doubt that it would have been possible, with adequate planning, to accomplish those results. I feel very sure that there would have been value in instituting C.M.P. at least a year earlier than it was actually instituted.

A STUDENT:

Would it be practical in a future war to institute C.M.P. proportionately earlier?

MR. SCHARFF:

I see no reason why it would not. If a plan--it might very well be a better plan than C.M.P. as it operated at the end of the war--were developed as a part of the mobilization program, if an educational and training plan were ready, I see no reason in the world why it could not be put into effect in a much shorter time than the approximate year and a half which we required before we finally got to C.M.P.

In other words, I would think within six or eight months it might be possible to do it. Now it may well be that our experience with C.M.P. in this war has established a foundation for some such action in the future which will be of great value.

LIEUT. COLONEL GALLAGHER:

Any other questions, gentlemen?

A STUDENT:

In the preparatory period, before we get C.M.P. (or a better plan, as you mentioned), what do you believe the interim plan should be? A system of priorities?

MR. SCHARFF:

I think a system of preference ratings such as we started with could be made effective immediately and would be very valuable during the period of months that I think would be necessary and desirable in order to institute a real program control. But I do not see why that period should have to be as long as a year and a half.

LIEUT. COLONEL GALLAGHER:

Are there any other questions, gentlemen? (No response)

Thank you again, Colonel, for a very splendid presentation.

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(19 July 1946--200.)P.