# PROBLEMS OF THE SMALLER WAR PLANTS IN INDUSTRIAL MOBILIZATION
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CAPTAIN HENNING:

During the war I do not know of anything outside of the great battles that figured more prominently in the headlines than the words, "smaller war plants". Deep in the mores of the American people is the tendency to spring to arms, or to the platform, or the press in any manner which connotes smallness or the underdog.

The question of smaller war plants lent itself to political ramifications. However, whatever our views on the question of smaller war plants may be, the smaller plant is going to be a factor, both from the psychological and from the very practical side, in an industrial mobilization.

Mr. Bonnot, I suppose, is a typical smaller war plants man. He is president of the Bonnot Company, which manufactures machinery for steel, chemical, mineral and ceramic industries. While a smaller plant, it is a very successful plant.

However, besides that background Mr. Bonnot combines a wide interest in public affairs. He is a member of the National Defense Committee of the U. S. Chamber of Commerce. Early in the war he came as a consultant to the Contract Distribution Service of the War Production Board and was later with the Smaller War Plants Corporation.

I know of no one who is better qualified to speak on the problems of the smaller war plants in industrial mobilization than Mr. Bonnot. Gentlemen, Mr. Bonnot.

MR. BONNOT:

General Armstrong, Captain Henning and gentlemen of the Armed Services: That was a rather heavy commitment, Captain. There probably are hundreds of people in the country better qualified to speak on this intriguing subject of smaller war plants than I am. However, when you tagged me to try my hand at it I did not feel I dared refuse. As you said, it is a subject that is full of political implications, emotional implications, and press values. But, over and beyond all that, there are some solid industrial values that all too often are considered lightly because of these other aspects which surround the subject.

CURRENT BEWILDERMENT--As I came from my train this morning and listened to the radio in the taxicab, I wondered whether we were meeting in a time of genuine peace to review the elements of war, or whether we were meeting in some very brief and challenging interlude. Over the air came word that we have a diplomatic deadlock in the U.N.O., that a special meeting of the British Cabinet had been called this morning; that Mr. Byrnes is in constant touch with the White House by telephone.

So ran the news. All of this in a day when we had hoped we could be pleasantly planning our return to a peacetime normalcy.

The taxi driver, a very plain sort of fellow, picked up his bit of philosophy out of the air waves. He said,

> "This is a helluva world. I hope we have no more wars, but it looks awfully bad to me. And all these strikes, he said, are getting us nowhere. Just because you get a little extra money by reason of a strike doesn't mean you're ahead any.
>
> "This hat I have on is a Knox that used to cost me five bucks, now costs me $7.50. Suits have all gone up $8.00; underwear has doubled; God knows what hasn't--but real wages haven't. No, I don't think we're getting anywhere".

There was a little taxi driver, not a very inspiring-looking chap, but he had picked up out of this whole muddle some sound, fundamental economics in terms of Where are we going?

THE INDUSTRIAL COLLEGE PROGRAM--So, here we are. We are trying to find out what has happened in the past few war years; what lessons we may learn, how we may utilize this experience in our planning.

While reading recently I found certain comments made in connection with the formation of the postwar Army and Navy Industrial College. I rather liked the expression of Under Secretary of War Kenneth Royall, in which he said,

> "Thoughtful analysis and evaluation of experience, both military and civilian, in industrial mobilization and demobilization and in the procurement and production in World War II are now the order of the day."

Then I think it was Admiral Nimitz who said,

> "Students of the Army and Navy Industrial College have not only to learn what has been done in the past, but to devise new and dynamic plans for the future."

General Eisenhower said,

> "You men cannot be satisfied that because we have had X number of procurement services within the Army that that number is always going to be correct."

I thought those statements rather clearly set the background for what is going on here. From them as guideposts I tried to draw some valid comments from my own experience pertinent to the subject assigned to me.

SECURITY RISKS--To some of us plain citizens back in the countryside there comes at this moment some degree of bewilderment when we realize that our national security must be measured in terms of electronic artillery, guided missiles, long-range rockets, atomic bombs, airborn disease, biological warfare; when a few pounds of material pack as much destructive punch as entire shiploads or trainloads did at the time prior to the last war or even toward the end of it. Then truly we must all become alerted to an entirely different basis from what served us in the past.

If I may digress for just a moment and offer a comment on the subject of atomic bombs. We in the smaller war plants also try to do a little reading as we go along. We must read over a fairly broad field because you see, we do not have a vice-president for reading, and a vice-president for entertainment, a vice-president for transportation services, and so on.

I was reading a very prominent American business magazine just a few weeks ago. That bit of reading, incidentally, occurred just about 10 days after I had participated in a meeting here in Washington--some gentlemen now here were present--in which General Groves recited to us some of his worries related to the Manhattan Project. Among them he emphasized the disintegration of the technical staff and the scattering of key personnel. Coupled therewith he admitted the lack of adequate sanctions or discipline by this Government over the disclosures by scientists of the things they learned in connection with that project. He said it is virtually and alarmingly true that there are no sanctions or penalties that can be employed to prevent or punish disclosure of essential information by nonmilitary personnel.

Now I know it has been stated time and again that no one man or small group of men could define or disclose the whole project. That is not entirely convincing to me. It presumes that the scientists of other nations lack all of the important links. But if we give them credit for the alertness we all believe they possess, then how are we to be sure which are the missing links? Or, which links (known to us), if disclosed, would complete their researches and speed their utilization. After hearing General Groves, I read this in the magazine referred to:

> "In the opinion of the editory of_____, scientists and engineers, as a group, represent our hope that civilization, humanity even, can withstand the atomic blast. He wants the politicians, diplomats and militarists, and so on, to devise some means of free interchange of the truth about atomic energy. His plan is to have these men meet internationally and open the proceedings by swearing to a new Hippocratic oath, for which he proposes the following:
>
> "As a trained scientist or engineer I acknowledge my profound belief that the Laws of Nature operate for all mankind, irrespective of nationality, creed, or color. I am therefore, in duty bound, to share my searches and discoveries in atomic

energy freely with all others by word of mouth, writings, publications, visitations; that this paramount duty to mankind transcends any lesser loyalty whatsoever."

This was the proposal of the editor of one leading technical publication, quoted and endorsed by the editor of an associate publication. The endorser states:

"Every plan for international control of the atomic bomb must come to grips with the problem of persuading the various nations to surrender their own nation or sovereignty to a new world government. I think most of us agree that science is and must continue to be international, and that the true mission of the engineering profession lies in its service to the public good. Therefore, we need not wait for an international meeting to begin to practice the basic principles of such an oath. Indoctrination could well be started in our engineering colleges and, by proper education, become a part of our daily life."

That startling proposal is challenging to a layman out in the countryside. When a magazine, published by the largest business publishing house in America, carries on its editorial page a proposed oath of that kind and endorses so unequivocally a proposal that loyalty to science transcends every other loyalty, then I say to you, Why are we here?

If it has come to the point where we, who like to see America survive, are willing to send the opposing teams in advance of a contest a full catalog of our signals, and a timetable on our plays, then we might as well disregard the objectives of the Army Industrial College and ignominously fold up.

Personally, I do not know what can be done about proposals like that. I sent the oath to one of the Senators who is actively concerned with the atomic bomb and asked him for his comments. He said, "I hope our scientists won't do anything like that."

I profoundly hope he is right!

SMALL BUSINESS THEME IS OLD--Getting a little closer to my assigned theme, we find that an interest in small business is not a new one in this world of ours. As far back as the fourth century, B.C., a smart old fellow named Aristotle, expounded his views on the advantages of a large middle class and the danger of dominance by either a large top class or a bottom class of the citizenry. He advocated a large middle class with full self-development of the intermediate classes of business and society.

In our own country, in recent years, there has been tremendous activity in behalf of small plants and small business. From 1933 to 1944 over 4,000 bills were introduced into Congress on the subject of small business. Naturally, they did not all pass, I think some 26 or 28 of them did, and some of them are not too sound.

BIG VERSUS LITTLE BUSINESS IN WAR--At this point, may I say that I am not one of these small manufacturers who believes that big business is all bad, all wicked, all vicious. Nor am I one who believes small manufacturers have been unduly kicked around or abused. I think they have, as a class, a high degree of virility, a full justification for existence and a stamina that will see them thru if they deserve to survive.

But I must also say to you that over the last six years a considerable amount of starch and steam and stamina have been taken out of them because they have had some very abnormal difficulties to face.

TIMETABLE EARLY IN WAR--May we give you something of the timetable of events affecting industry early in the war. We will then have a fuller background for our discussion.

On 4 January 1939 President Roosevelt urged preparedness and changed the Neutrality Act.

On 16 September 1940 he signed the Conscription Bill.

On 20 December 1940 Mr. Knudsen, Mr. Hillman, Mr. Stimson and Mr. Knox organized the Office of Production Management.

On 29 December of that same year President Roosevelt called for all-out aid to Britain and an acceleration of our Defense Program.

Of course in 1941 things really began to happen. On 6 January President Roosevelt asked for all-out aid to the democracies.

On 7 January the President gave joint powers to Knudsen and Hillman over the Office of Production Management and established Divisions of Production, Purchase and Priorities, all of which had great significance to small plants.

On 31 January the Defense Commission requested machine tool builders not to deliver tools after the first of March unless customers had a priority rating.

On 24 February O.P.M. invoked mandatory industry-wide priorities on machine tools and aluminum.

On 17 April price ceilings were set for steel products.

On the second day of May the President demanded a 24-hour day, 7-day week for machines in the defense effort.

Then on 27 May 1941 the President proclaimed an "unlimited emergency" in a nationwide broadcast.

LOCAL PLANTS PROGRAM--While we were still not very far into the war cycle unfortunately much had already happened to upset the small plants. It so happened back in our city of Canton, Ohio, in 1939 and early in 1940

we began to concern ourselves soberly with what seemed to lie ahead. We saw the situation continually narrowing on the civilian front and expanding on the war side.

As we came into 1940 we got busy about it and got a group of small companies together and said, "What shall we do?" Well, we realized that we had, first of all, to identify ourselves industrially to the people who would probably use us. So we called in outside engineers to conduct impartial and objective surveys, make the necessary facilities and manpower tabulations and compile the capacity data individually and collectively of all these smaller local plants. That was toward the middle of the summer of 1940.

About that time a group of production engineers from some of the larger companies joined in the study of the situation and said, "We want to help too. If we can provide any special guidance, due to our production experience, we shall be happy to do so".

The plants associated in the group probably had employees ranging from 10 to 400 men. Rather early it became obvious to all of us that at that stage the procurement agencies, understandably enough, were not ready for small plants on direct contracts. It also became rather plain to us in the Canton area, I presume to manufacturers everywhere else, that small plants--I am speaking now particularly of the metal-working plants--were not well qualified in most instances to take on prime contracts.

We therefore concluded that it was wiser for us to guide our thinking and plans in the direction of subcontracting activities in whatsoever tiers (spelling t-i-e-r-s) although, we had the other kind too. So we concentrated our studies on that angle.

METHOD OF MOBILIZATION NEGLECTED--In that period, from the middle of 1940 until well into 1942, it was an extremely difficult thing for the smaller plants of the country to get much of a hearing on the subject of how they could serve. They felt something like the man caught in a wind tunnel with sand and feathers blowing in his face. They were in the whirl of war but they were not getting any place and they just could not find their way.

So finally we got busy and prepared a little program out in the Canton area, which we thought was pertinent to the general situation at that stage. You will all recall that in 1940 there was no agency of a civilian character operating outside of Washington for the purpose of mobilizing smaller plants. It was really only toward the end of 1940 that the then O.P.M. got busy thinking about the smaller plant mobilization.

Some of us became seriously concerned. Why was it that approximately 50 percent of America's manufacturing capacity as represented by plants employing less than 250 people, approximately 48 percent of the total dollar sales and approximately 47 percent of the payrolls prewar did not seem to have been reckoned with in the planning for the war program? We could find very little evidence that this segment of America had been rated as a part of industry. It was the orphaned segment, but not supine

however. The most limited amount of attention was given this problem and the plants involved were not consulted.

Let me state as forcefully as I can that this business of planning for such a large segment of American industry instead of planning with it was, in my own humble judgment, the underlying cause of much of the trouble, much of the scrambling, much of the ballyhoo and hullabaloo that ensued later. Had there been in the early stages of war planning not only three big groups represented (and appropriately represented)--namely, the Military, the Government, and Big industry -- but had there also been representative people trying to think in terms of the large group with capacity that was not included in big industry, there would have been infinitely less trouble getting smaller plants aboard in an orderly fashion as the production job moved along.

I wrote a letter in 1940, in the name of the National Defense Committee of our city, to the Office of War Information. I rather prize the answer. I submitted the simple question:

> "Will you name for us any individual connected with the Washington agencies having to do with mobilization for war, who, in civilian life, has been engaged as a private owner, operator, or executive of a metal-working plant employing less than 250 people?"

Now I thought the letter would be tossed aside as impudent. I was not sure just why it was answered, but it was answered by the head of the Office of War Information. He said in substance:

> "We have carefully checked the records and exhaustive study reveals that there is no one of that description in Washington."

Well, I suppose it was not too important to some people, but it did confirm what we had suspected, namely, that there was no sign of representation of smaller plants in the planning groups or in the mobilizing agencies charged with bringing into production our total manufacturing capacity.

PROPOSED SUBCONTRACTING PLAN:--So, out in Canton we prepared what we thought might be a valid program and submitted it, in December 1940, to quite a few agencies. It was designed for mobilizing secondary plants for subcontracting. We went specifically to that issue, believing it was the one way in which such plants would play their most important role. With your permission, I might read just a little from that proposal because I had considerable to do with its preparation.

Let us recall that in the fall of 1940, while the Military agencies were beginning to spread across the country the civilian war agencies were still concentrated exclusively in Washington. The objectives sought by the Government and business as we saw them were:

"(a) To utilize to the maximum efficiency existing man and machine capacity throughout the country, irrespective of company size;

(b) To utilize man and machine power on the particular classes of work for which they are best adapted;

(c) To minimize time and effort required to attain effective and satisfactory output on each job or part;

(d) To sift out quickly and tag for special handling those items, parts, or classes of war work for which existing facilities and manpower are definitely inadequate or unavailable. Then to accelerate on a preferential basis such specialized facilities and manpower. To avoid competition between the expansion needs of existing plants and the special needs thus segregated. To delay expansion of standard facilities until existing plants are fully utilized and until specialized needs are cared for;

(e) To avoid the unsettling of labor resulting from over-concentration in large plants at the expense of others. To utilize manpower where presently employed, insofar as possible, and thus maintain better stabilization throughout industry and minimize housing, transportation, and other social problems."

Now it happened that only a fraction of the facilities and manpower of secondary plants were listed or classified by government procurement agencies. With all due respect to the very fine effort that had been made by the military agencies in prewar years to list, classify and rate plants, that listing (perhaps by reason of budget and other handicaps) covered only a small percentage of total plants or total capacity. I hope we are not in postwar going to be like the traveling Scotchman who was bothered with heart trouble and therefore decided to buy his ticket only from station to station for fear he would not use up a through ticket. Thrift can be overdone.

So I sincerely hope, as we look back on that experience and the weaknesses of our planning in those days, we shall hereafter somehow find enough manpower, money and foresight to meet more completely our true needs in the early but important stages of our planning.

This Canton proposal went on to say:

"A substantial part of the productive capacity of the country is among such unlisted or unclassified plants. By reason of size, facilities, and so forth, these secondary plants are not adequately qualified to serve as prime contractors on volume work or production of entire units, though constituting an important potential force or source in the role of subcontractors. The secondary plants or firms know

this and will not, in most cases, see fit to apply for such prime contracts, though both qualified and anxious to serve as subcontractors."

"Any attempt to carry complete data in usable form at Washington on smaller plants will be prohibitive in detail and impossible of effective use."

"These smaller concerns, now trying to serve, are almost completely dependent upon random information, local shopping, trade connections, or job brokers, there being no organized setup, so far as we can determine, for putting their resources at the disposal of the Government or at the disposal of prime contractors who can best use their capacity."

General Armstrong and perhaps some others may disagree with that, but remember we said there was no organized channel; we were thinking particularly of nonmilitary agencies because, after all, that was how the people in small plants were expected and told to concentrate.

"That prime contractors are likewise handicapped by lack of organized methods for working with and through such prospective subcontracting plants, being likewise compelled at great expense to comb, shop, sift, and sort out such help in a most tedious and time-consuming manner."

"Present subcontracting procedure too frequently takes jobs to distant plants while local plants having equal or better facilities open could have been used had a clearing house for needs and facilities been in operation."

On that point there have been some most interesting experiences, as many of you know. There is the case of a man calling from one department of a plant asking if an agency could find some emergency help for a certain operation, only to be told by an office a hundred miles away, "If you'll see Plant X one block down your street, you'll find open facilities there". That happened not once, but many many times all because fundamental coordination was not all it could or should have been.

Another point in the Canton proposal was that "positive danger may develop in a system wherein brokers carry about drawings and data and seek suppliers on diverse important parts or units with no apparent insurance against misuse of such data. There was a time in that period when a manufacturer, coming into a government agency, had to go through infinite rigmarole to identify himself and thus make sure the F.B.I. was not after him. Throughout the same period, by some strange combination of circumstances, coming into the manufacturers' offices were brokers, great numbers of them, who were bringing and exhibiting plans of all kinds, marked "Restricted" and "Confidential" without bothering to go through any cautious routines. It was something about which to be concerned.

Such brokerage involved fees and costs which possibly could and should have been saved if a regional clearing house system had been available for subcontracting activities.

I would like to have the interest at one-half of one percent, on only 10 percent of the money that was needlessly spent by small concerns and big concerns through brokers and jobbers and that type of person trying to get this war job done. We felt that some system could be devised which would make a great deal of that unnecessary.

This was another reason we proposed such a regional clearing house system for subcontracting. Its purpose was to assure standardization of procedure; to clothe the program with unified direction and maximum authority. Up to that time everybody started on his own home-front to get himself into the war effort, using his own resourcefulness and his own devices to find the road map and the office combinations and the procurement routes.

But with all America becoming steamed up by the patriotic zeal that was stirring in all of us in those days, and with each man hunting his own way and his own line of action, we ran into a heterogeneous mixture of methods that were not effective or workable. So we said, "clothe the program with unified direction and maximum authority; make necessary expense funds quickly available", because in those days, what was promoted on the local fronts and across the country generally was individual initiative and participation on a basis of local voluntary effort. There was no government program, no rules, no routines, and no direction.

COORDINATED PROCUREMENT--Next we proposed to provide maximum defense production with minimum time loss in work placement, to avoid conflict of interest and procedure between various procurement agencies of Army, Navy, Maritime, Air Corps, etc.

How much more effective it would be if the Service procurement agencies and the civilian war production agencies across the country, trying to mobilize for war, were to have parallel areas to mobilize, consolidated locations of offices, uniform contracting procedures across the boards, elimination, if you will, of competition for sources. Why not employ the standards they would use if they were acting as general purchasing agent for Sears-Roebuck, A & P stores, Pennsylvania Railroad, General Electric, or any other big enterprise you choose to name.

Such firms also have to subdivide the purchasing departments, but as they subdivide assignments you may be sure they do not allow these men to fight each other. They do not force a prospective supplier plant's representative to scatter himself all over town or all over the country when trying to answer their inquiries. While they are departmentalized, they still have unity and coordination which simplifies the whole program and makes it infinitely more effective than if operated on an uncoordinated basis.

Without going too deeply into this phase may I submit that if the Army Industrial College is thinking about or planning for what might be a repetition of a major war job, please, we beg you in the name of the small

plant, try to find some way more intimately to coordinate those heretofore greatly diversified and scattered procurement activities.

In that connection back in 1940 we urged that O.P.M. or some other proper government department institute a procedure embodying the following steps:

"Select some one of the several present plans of geographical division of the country; for example, Army or Navy procurement divisions, state boundaries, Reserve Bank Districts, or other units, preferably not large."

"Consolidate and list at Washington, according to such adopted geographical divisions, the names of all prime contractors now or hereafter serving any and all branches of the defense departments, and British or other allies or friendly powers."

"Designate, assign, or provide for each such geographical division a centralized authority to act as a coordinating regional clearing agency between the prime contractors within such area and the prospective subcontractors in such area."

"Provide each such clearing agency with complete essential data on prime contracts already awarded or to be awarded from whatsoever division of the service or other source such contracts originate."

"Directly from Washington, instruct all such prime contractors to file periodically, whether it be monthly, semimonthly, or weekly, or more often, with the regional clearing agency necessary basic data on which such prime contractor needs or desires production aid. Such data should include quantities, specifications, tolerances, materials, and any other data or drawings essential for an intelligent study thereof by the prospective subcontractors."

"Authorize and instruct the regional clearing agency to catalog and circularize regularly through the area served by it a condensed summary of such items listed by the prime contractors in the area to such firms as can be deemed to be rightfully entitled to it. This summary need only refer to prime contractors by number or other code designation to avoid the matter of people rushing in and bothering the daylights out of them."

"Such code should indicate the plant location in a broad degree at least, such as northeastern Ohio and southeastern Indiana, and so on. Such summaries should

then be circulated throughout the other areas and regions and districts on the items that could not be cleared within the local district. With such a system existing, personnel in the local communities and committees organized for defense work, would see that this data became available for study by local plants seeking it and they, in turn, will be able to measure up, by a proper cataloging of demand requirements, their own capacity to serve."

"The very heart of the program is this phase:"

"Local trained personnel, plant officers, taking the initiative in searching out their best lines of action and following up first, that work which they know they can actually perform; and, secondly, when they can perform it. Obviously, no outsider can maintain adequately current data on what they can best do and when they can best do it."

Now, I am not sure whether our proposals did any good or not; but not long after that the O.P.M. stimulated its small business activities, by allowing a budget of not too many thousand dollars to Mr. Mehornay to organize the bureau of small plants. Mr. Mehornay, with his limited personnel and limited budget, had to grab for a quick way to operate in the field. His first step was to seek field contact offices for small plants. Of all places he had to use the marble halls of the Federal Reserve Banks. These "poor little guys" in their small plants, had to get out of their overalls at 11 o'clock, drive for some hours, getting to the banks about 2:30 o'clock, too often finding the office closed. They had to do the same thing time after time.

They were none too happy about the marbled halls setup. That is not to be blamed on any one thing, but on a generally shortsighted policy as to field requirements, organization, and timing.

AWAITING RESULTS--We soon began to get quite curious as to how these offices were going to function effectively. The ballyhoo became something terrific in late 1940 and 1941. These field offices were announced as being all set and ready to serve small plants everywhere. You would go to these Reserve Bank offices only to find them understaffed, and underbudgeted, and they had little or nothing small plants could talk about, practically no work to offer them. The ballyhoo preceded the performance by a great margin. Such conditions did not make for good will, because the distances people traveled and the time they spent with gas rationing and tire troubles all tangled up to make a considerable management headache.

REVIEW OF FIELD OFFICES 1941--So in the middle of 1941 out in our city of Canton we said, "We are going to find out what goes on here". Accordingly we wrote the Defense Contract Service offices all over the country to find out what catalog lists or definitions they could provide of the work that was open in their areas. We had a lot of plants in Canton that wanted to go to work.

Finally, much to our delight, we found that in one city, Chicago where there was a high degree of coordination between Ordnance, and the Navy, and the Defense Contract Service, they had gotten together in this matter of defining jobs and organizing data and distributing information to any plants that could possibly use it. Heading up the Ordnance activity at that time, with thirteen hundred people under his jurisdiction, was none other than General Armstrong. I emphasize this because in Chicago alone, gentlemen, at that stage was there any semblance of an organized orderly plan for mobilizing secondary plants. Noting the Chicago leadership, I came to wondering whether the effort there could have been just a typical Chicago system? For, you recall perhaps in your youth, as in mine, many of us got considerable enlightenment out of the impressive mail order catalog from an institution located hundreds of miles away from the place of reading it. Those people in Chicago had seemingly made a specialty of defining in superb catalogs the thousands of items they had to sell. They did not make the people from Maine and Washington and Texas come to Chicago to look over their shelves. They took the information to Maine and Texas and Washington and also spread branch stores in every valid market. So the atmosphere in Chicago must be particularly conductive to the clear cataloging of information and smart dissemination of such data.

This very worth-while system caught on very slowly countrywide. In this survey in August of 1941 we asked the then 36 main offices and branches of the Defense Contract Service in the Federal Reserve Banks, this simple question:

> "At your earliest convenience will you please mail in triplicate any bulletin, digest, catalog, or list put out by your office, setting forth defense needs or subcontracting requirements in the area served by your office?"

We got a great assortment of replies. Five of the twenty-one who reported of the thirty-six who were queried issued bulletins, differing substantially in scope, composition and use. Many of the others put out none. Some had intentions to do so. Some thought they would. A fraction said it was permissible to put us on their mailing list, and they would. A fraction said, they were not allowed to put us on the mailing list, and they would not. There was absolutely no uniformity of policy or practice or plan although this was in August 1941, when for almost two years small plants had been going down hill.

SMALL PLANTS WERE SHRINKING--Small plants were losing ground for a combination of reasons, which were mostly beyond their control. The restrictions on civilian production and the mobilization for military service combined very strongly to drive the workers from the small plants into the rapidly expanding big war plants. The early contracts had the effect of ballooning the big plants while deflating the little ones. The men just hopped from little to big for a variety of obvious reasons. Wages had moved up in the big war plants. The hours of work were extended further increasing the take-home pay; and the degree of essentiality and job security of course appeared to be higher. So in considerable numbers

through that cycle men of all ages began to drift to the bigger plants, and the smaller plants struggled to survive.

This plant personnel problem , coupled with the materials problem as we moved into 1942 really had many plants on the ropes. You can appreciate why they wanted some coordinating service to show how they could get aboard. At that stage the agencies of the Government that were publicized as looking after those problems had not yet found a way to coordinate on a systematic basis, presented no valid way for these plant people to study requirements data, and how then to match their open capacity with the requirements. Those indispensable routines were entirely lacking too long.

HASTY PLANS THEN TRIED--Ultimately much happened in the matter of organization on the small plant front. Mr. Mehornay was succeeded by Mr. Floyd Odlum, who with enlarged authority headed an enlarged division called the Division of Contract Distribution under the O.P.M. Mr. Odlum went into quite an extensive organization and promotion job.

Those were the days of the defense trains, three of which toured the country making a great number of stops and showing a lot of things to a lot of people. The exhibit truck caravans were formed as were the bits and pieces exhibits and consultations. Much of that was more in response to public and political pressures than because anyone was too convinced that it would do a job of fitting all small plants into the war program. In the future considerable study might well be given to which, if any, of those methods should be reemployed.

Mr. Odlum stayed on about five months. Then Mr. Walter Wheeler took over. He remained about three months and Mr. Hallenborg took over. About that time the Law 603 was promulgated. Mr. Hallenborg went back to his company. Some of us had to pinch-hit meanwhile. Then Mr. Holland came in under Law 603 as director of the Small War Plants Corporation.

Mr. Holland pursued his convictions diligently. Seemingly his engraver's background hurt his administration because an engraver does not have too lively a sense of time. If he is working on something with diligence, neither hours nor days count too much. Mr. Holland was determined to create a more favorable atmosphere in dealing with the Military. He used many weeks doing so. Meanwhile and investigating committee of Congress toured the country. They reported a badly disorganized condition in the one hundred and twenty-two field offices set up to serve this cause. Mr. Holland left.

General Johnson came over from the Ordnance Department and carried on. Colonel and later General Johnson stayed a few months and Mr. Maverick came in. Mr. Maverick stayed until a few weeks ago. The Department of Commerce and the Surplus Property Administration have now taken over what was left of the Smaller War Plants Corporation in compliance with an Administration order.

There was nothing wrong with either the purpose or the sincerity of the individuals who successively headed up these activities. The thing that was deadly wrong was that the whole program had not been planned adequately ahead of a war either by Congress or by somebody else and a plan carefully formulated that all were willing to continue. An advance organization plan and budget plan were needed, both in keeping with the size and the purpose of the program and above all an administration policy to provide follow-thru without endless and avoidable changes. For with every change of jurisdiction came a change of budget, came a change of top policy, came a change of timing, and came a change in personnel. No organization can perform its full service or make a satisfactory record under such unbusinesslike conditions.

MACHINE TOOL UTILIZATION--Now General Armstrong, my time is running faster than I thought it would. There are many other phases of this subject that I would like to discuss but only one in particular before I close.

It was my privilege to work actively with Brigadier General Stewart E. Reimal and Captain E. R. Henning of the Navy when they were with the Army and Navy Munitions Board, on machine tool problems in a joint effort to formulate within the War Production Board a way for bringing together the idle capacity of machine tools throughout America with the current critical needs. This was called The Critical Tools Service. The record, if examined, will speak for itself.

But, despite an outstanding record of important accomplishments, again something happened in a jurisdictional deadlock and the program lapsed. This came about when the Smaller War Plants Corporation was divorced from the War Production Board. The authorities began to clash. Who was going where and what was going with whom were the issues. At that stage the War Production Board took over many responsible field office people and thought they should keep this service. The S.W.P.C. thought otherwise. While the debate dragged on, the service was allowed virtually to decline and lapse. Another thoroughly sound program was lost.

Strangely enough, about a year later there came along an order of the War Production Board urging more drastic steps to find and utilize idle machine tools. One of the all-out systems for finding and utilizing tools and services, which had been quietly but fully organized, which completely justified itself by smooth and effective action in eliminating many bottlenecks and saving many tools, man-hours, and much material was recklessly ditched, but later found to be still so critically needed. All through the war far too many phases of the small war plant activities were similarly mishandled.

CONCLUDING COMMENTS--In summary it seems clear that if we seek a scheme for mobilizing the capacity of the smaller plants and factories for war, we must get away from the contempt concept as to small plants. There developed a sneering psychology that was most unsatisfactory and unfortunate. For smallness is relative. You may be big in some industries with three

hundred men and very small in others. In a chemical plant where the investment per man is about sixteen thousand dollars they can produce high dollar volume with but dozens of men. The reverse occurs in other industries where the manpower is high compared to investment and sales.

Business also may be classified as to manpower, assets, or even as to location. A plant of 150 men in Chicago, General Armstrong, was a very tiny plant. The same 150 men out in some little town in Wisconsin would make a big plant. So this concept of bigness and smallness must not be handled loosely.

Personally I think the military and industrial forces should jointly define and catalog all plants as to capacity in each specific industry according to some accepted classifications.

Then in each classification grade the plants as to capacity, standards, security and other factors.

Above all, in planning for the future, let us find some way of coordinating procurement practices. Let us find some way of defining the job to be done and of effectively distributing such data to the people who can fill the needs. Let us clothe with adequate authority consolidated agencies properly located across this country, with power to act promptly and with finality on all mobilization problems. Above all, let us use our best influence to avoid repetition of the costly and confusing merry-go-round of policies, personnel and procedures which characterized this small plant program in the war effort now being reviewed.

Thank you very much.

A STUDENT:

You may call it a plant with less than five hundred if you want to get away from the term "small war plant". You can say "a plant with less than 500 employees". Then in writing up the contract why could you not say, "50 percent of this contract must be handled by plants with less than 500 employees"? Then you could make the prime company list the other companies, several of them, list the jobs they are to do, list the dollar volume of each of the subcontracting jobs. Then you could let a firm of over-all engineers merge the work of these companies. That has been successfully done by Ford and General Motors. Then you could get away from the objection of the fellow who says, "I object to being classed with Sears Roebuck, Ford, and General Motors".

Also I think we have to look forward to the time when there will be a common purchasing division of the Army and Navy for dealing with those small plants. Why should we not coordinate our purchasing people where they have been getting common items?

MR. BONNOT:

I am the last man in the world to get into a discussion of an Army and Navy merger.

I agree with you that definitions can and should be cleared up. For example, What is subcontracting? If you go down thru the texts of war documents and directives, you find probably fifty different definitions of what is a subcontractor.

A STUDENT:

May I bring up this point: The Services did not know where to go. They did not know who these manufacturers were when the war started. We had to establish in our plant--and I am talking primarily of the airplane plants--outside contracting sections, that were eventually paid for by the Government. They did not know anything else but to go out to try to find those small plants to do that work.

We needed those machine tools. In the early part of World War II it was impossible for us to break our plants down. In the second place, we had our policy requirements. We had to start up a Small Parts Association, a manufacturing association, on the west coast, with about eleven hundred members. They knew in their organization what they could do in their jobs, what equipment they had and how old it was, the number of men they had, and so forth. Then we had a source to which we could go. We had over thirty-five hundred subcontractors in the small war plants.

MR. BONNOT:

What stage was that?

A STUDENT:

That was toward the middle part of 1943.

MR. BONNOT:

That is right. That focuses the problem. You see, the thing we are critical of is that we went from 1939 to 1940 and 1941 with practically no program on small plants.

A STUDENT:

I am not trying to criticize. That is why I suggest that if in the future we could get a list, either through the Chamber of Commerce or through your own organization of some kind, of your plants employing 400 or under, then in the case of an emergency we would know where to go.

MR. BONNOT:

I firmly believe, Colonel, that in this peacetime cycle we should, jointly, among the civilian and military forces, agree upon some channel, civilian or otherwise, that will act as a focusing point for definitions, of industrial capacity everywhere and show what it is and where it is.

There are some potential sources. Early in the war, the power companies came to the Government and said, "How can we help on this job?"

It suddenly occurred to us that they had the same parallel objectives and purposes. They were trying to use existing power installations to the fullest. They knew every industry on their line. They knew what they had, where they were, and broadly what they could do.

A second source perhaps is the telephone companies. You do not want to have every switchboard operator knowing all of your secrets; but in the engineering ranks of the telephone company they may have classification and studies of substantial value.

A third, you might assign such duties to the engineering staffs of your land-grant colleges and get a continuous coverage of the whole problem.

GENERAL ARMSTRONG:

Mr. Bonnot, we found one of the most prolific sources of information was another agency that you have not named, that is, the railroads. The railroads gave us in 1940 a lot of information. I used to have more railroad men in my office in 1940 than any other group. Much to my amazement, they had the most complete data that I could find anywhere on small plants that I had not been able to visit personally. So I think that is probably a source worth considering.

MR. BONNOT:

Quite so, but I do not think you can rely on the chamber of commerce type of organization for this job. I do not think you can rely on the manufacturers associations alone. There is no unity of structure across the country. Let us rather tie in with some agency that has or can provide more uniform engineering practices and controls across the board.

I believe it would be tremendously worth while to have America continuously cataloged as a basic step in industrial preparedness.

A STUDENT:

Would not the Industry Advisory Committee be a good one to handle that?

MR. BONNOT:

No. It's enthusiasm is going to lag, I think, to the point where it would not be a reliable service. It has to be a service that will spell this out continuously and maybe even receive a reasonable fee for operation, but be supervised constantly by joint action of the Military Forces.

A STUDENT:

Why would not a manufacturers association devoted to plants with less than five hundred employees, or whatever number you want, that would provide the information, be desirable as a centralized agency, rather than power companies?

MR. BONNOT:

I would think such an association is not keyed to such a dull job either physically or spiritually. There is no coordinating office to join the many manufacturers associations into an adequately disciplined group for this work.

A STUDENT:

Why would not an organization of these smaller manufacturers themselves be desirable?

MR. BONNOT:

Let us forget "small". Let us take total manufacturing capacity and get it organized. How do we know who is going to be big when the next war comes?

A STUDENT:

That is quite true. As I saw it during the war, it was not too difficult to keep in touch with the organization of the large corporations in the matter of location of the plant or plants of such size and reputation that everybody knew about them. The plants that were hard to get hold of were the ones that were specialized and that were important to us, they were not known because they were small in number of employees or in output, in dollar value of output. They were not always found. There was no way of finding them except thru a large number of chambers of commerce, power companies, or what have you, whereas if there had been one organization that was coordinating those of smaller size or of smaller output, it would have been very helpful, at least from what I saw.

MR. BONNOT:

I think that during a war we can rely on that type of organization to some extent. Certainly in the interval between war, especially during the letdown that follows a war, something a little more positive and continuous is needed to carry such data forward and keep it organized.

GENERAL ARMSTRONG:

Mr. Bonnot, I think that we should have some consideration for you.

I want to thank you for your contribution and to tell you that during your talk this morning the thought occurred to me that I want to establish a committee. We will try to find a more euphonious name than "Small War Plants Advisory Committee" to the Army Industrial College. But I am going to name you the chairman of that advisory committee, which will advise us and keep us in touch with your thinking on this important subject. We shall get, say, six or eight members from all over the country to join you, and in the future you will be our advisers on the best ways and means of solving the social problems which we cannot divorce from our thinking in times of peace and war.

I am certainly very grateful to you for your contribution this morning. We appreciate your being here with us and giving us that very lucid exposition.

Thank you very much.

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(19 April 1946--200.)s