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CONVERSION AND RECONVERSION OF INDUSTRY IN WAR

5 February 1951

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COLONEL KLEFF: Gentlemen, no doubt you have all heard the expression that it takes time to get the wheels turning. In any study of war production it is essential that we have an understanding of the difficulties involved in getting into war production and then at the end of hostilities of getting back into civilian production again. The difficulties involved in these transitions are the basis of our lecture this morning, "Conversion and Reconversion of Industry in War."

Our speaker, Mr. Pocock, has had considerable experience as a management consultant. At present, he is a partner in a firm of management consultants. He is therefore distinctly qualified to discuss this subject with us. It is a pleasure to welcome back to the Industrial College of the Armed Forces and to present to the staff, faculty, and student body Mr. John W. Pocock. Mr. Pocock.

MR. POCOCK: As the son and grandson of Presbyterian ministers, I learned at an early age the value of a few good spot sermons which could be remodeled annually and called into service as "breathers" about the time the good parson began to feel a bit world weary. Indeed, the repeated shift of some pastors from congregation to congregation has sometimes been attributed to a leaning toward changing the audience rather than the sermon--thereby escaping the intellectual grind of beating out "new material."

As the Commandant of the Industrial College, General Vanaman, has learned with unseemly alacrity the possibilities of a perversion of this procedure--especially since there is an annual replacement of this congregation--and has set up his defenses in admirable though somewhat disconcerting manner, each year my subject is changed for me--not quite enough to discourage me from taking a crack at it, but enough so that I can't beat the same old drum!

This year's subject of "Conversion and Reconversion of Industry in War" is a most provocative one since we are discussing the single most important topic in the industrial top-management picture today. The topic is broad. I'm going to exercise my prerogative of selection and hit only a few basic themes.

The inclusion of reconversion in the subject title strikes a sound note. There are those who might claim that the problems of reconversion are so far away that their consideration distracts unduly from the work at hand--that as we battle for the survival of our way

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of life we cannot indulge ourselves the luxury of any reconversion apparatus. Yet we must reconvert someday. Why struggle if in the course of the struggle we ourselves destroy the very thing that we strive to save--our ability to maintain and raise the degree of civilization--the standard of living we have come to enjoy. Industry, since it is a major factor in this pattern of life, is not completely expendable and some minimum program to meet reconversion problems should be permitted.

The battle performance of the carrier-based fighter is cut by each added pound it carries--yet we permit the luxury of an arresting hook so that we can retrieve plane and pilot after completion of the mission. And many weary pilots trying to make the deck after a long, hard mission could have used another foot or two of luxury. So, unless we plan on sending industry on a one-way mission, let's allow some minimum reconversion apparatus.

I speak of this to you gentlemen because you will be industry's advocates at court in the positions to which most of you will move. It will be your primary responsibility to present industry's views and requirements at the military council table as defense programs are developed.

You gentlemen are top management. You must deal intelligently with matters of selection of major objectives, top policy formulation, and basic program development. You are in this college to develop your thinking and problem solving ability rather than any digital dexterity in paper shuffling.

Men are creative when they think and good thinking takes time. The really successful top-management executive tries to keep a major portion of his time available for thoughtful contemplation of the problems facing his operation. You will be expected to give top guidance to industry in the conversion effort--so let's spend some time contemplating the problems of a converting industry. Let's think at a policy level.

Once the basic policies and programs are determined, let industry take over the execution of program detail within industry. Policy guidance and detail direction are two entirely different things. A major pitfall--and I cannot emphasize this too strongly--is the temptation on the part of some military planners to carry industrial planning programs into industries and companies in detail. In so doing, military planners dissipate their strength and move into a labyrinth of unfamiliar local detail in areas of planning where any company worthy of the name has long exercised certain capabilities. Let the strength of the armed services participation in industrial conversion programs be in mature policy guidance--not in trying to do the job for industry.

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Let's take a look at the situation we of the Nation's industry face today as we try to forecast the probable future environment in which we must operate. I want to take you back to the very start so you can sit as executives today trying to look out ahead, seeing what we see from the industry side. We must take a forecast based on today's likelihoods, but since the greatest likelihood is that of change, our primary objective must be flexibility. Any conversion program the Nation undertakes must make us industrially "light on our feet."

As we sketch this pattern, come around and sit in the president's chair. As president of the company, we find ourselves looking into an uncertain future—but one in which the most probable pattern must be forecast as a guide to our industrial planning. I believe that conservative assumptions as to the future might be made somewhat along this line:

1. That today's international conflict is waged by somewhat more subtle means than open military operations. It is a battle for the minds and emotions of populations; an undermining of economics; a progression of political maneuvering. This means of conflict extends the period of conflict—perhaps over generations.

2. That our Nation's fundamental strength and attraction is the pattern of life achieved through the spectacularly successful practice of our free-enterprise system which has given birth to, and is in turn supported by, our unprecedented industrial machine. In the battle of ideologies this industrial machine must continue to maintain or further advance our standard of living—else we lose by default in the years to come.

3. That the existence of military might is a powerful deterrent to overambitious extensions of propaganda, economic and political warfare operations by our opponents if they recognize the probability that complete military defeat may come their way if they overplay their hand. We must, therefore, build and maintain a substantial military machine.

4. That we are, therefore, facing a guns-and-butter economy for some years to come. This period will be shorter if we are forced into all-out military operations which end successfully—but we will not as a nation initiate such a course. The period will be the longer if we continue warfare short of all-out military operations—perhaps, as one writer has conjectured, to the year 2000. Therefore, as president of my company, a conservative estimate might be that this generation of industrial top management has seen the sun set on the old order of things and must adapt its thinking and planning to a split guns-and-butter operation for the foreseeable future.

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5. That ratio of guns to butter may fluctuate widely as pressures and counterpressures build up and dissipate. Industry must have two taps under a reciprocal control--the one flowing peacetime product, the other flowing war material.

6. That the need for rapid increase in flow from either tap--"expansibility"--recommends a wide base from which to expand. Rather than having 25 percent of our companies 100 percent converted, it is better security to have 100 percent of our companies 25 percent converted. This means most individual companies must straddle the line, being ready to move in either direction--a situation fundamentally different from World War II when entire operations were shut down and converted--the peacetime product tap being disconnected for the duration. It will be noted that if this last assumption--the rubber ratio between peacetime and war products--be true, the terms "conversion" and "reconversion" lose much of their meaning as absolute positions but are now merely indicative of the direction of the swing between guns and butter.

Summing it up, as president, I'm in for a prolonged period of mixed operations, during which time I must maintain a flexibility which will permit a rapid variation in my "gun-butter" mix. This will be the basis to which further points I want to make will be related.

If this be the case, anticipating the prolonged period of problems in which we will be involved, why should I bother to convert some of my capacity to defense items? Aside from obvious patriotic motives--and I certainly don't want to rush past these motives quickly--there are some good sound business reasons. The basic reasons can be related to responsibilities that I, as president of our company, have toward three distinct groups:

1. To the Nation--the society which has given my company its opportunity, to whose needs I produce.--It's only prudent to help defend the base of my success and to meet the new needs of my country.

2. To the stockholders whose faith in free enterprise has led to their investment of accumulated capital in anticipation of a return.--Their investment deteriorates unless I maintain a competitive, profitable, growing business.

3. To the employees whose lives as individuals are affected greatly by the company's fortunes.--They deserve job security and opportunity to grow as individuals in the business.

These points are valid for any kind of business--peacetime or defense. Satisfy your public, your stockholders, and your employees and you're doing all right. Miss on any one and you sabotage our free-enterprise system. As we study the requirements of a healthy

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industry, we should not lose sight of the last two responsibilities simply because the first responsibility is emphasized in an emergency period. You gentlemen going into the field of industrial-military liaison can have a stimulating effect if you observe and make decisions in the light of all three of these fundamental realities of our industrial economy.

Here is how one company stated its objectives in converting--and I'm paraphrasing a bit:

1. To carry our share of the burden of defense.
2. To hold together our management team as an operating organization with continuing challenge to stimulate executive growth.
3. To replace lost regular product volume with defense work.
4. To keep jobs for our people and if possible provide jobs for people in the community laid off by nonessential business so that they will not be forced to leave their chosen community to seek work.
5. To endeavor to develop labor skills and facilities having a possibility of long-term, nondefense usefulness.

I could give you other lists--some much longer--but the reasons given usually cover the three responsibilities we noted earlier. Appreciate the motivation behind industry's moves to convert and you'll continue to strengthen the bond between the military and industry in the national defense effort.

Now, another step in our thinking. Granted my company wants to convert, what can we contribute to the national defense effort?

I think we get concerned with the contribution a company can make in the terms of physical facilities adaptable to a specific program, to a point where we overlook other contributions. A major portion of the industrial conversion programs laid out in our typical defense capabilities studies, concerns just this physical facilities conversion problem. While the importance of physical facilities cannot be denied, there are other factors of equal importance.

Here are some contributions which can be made by a company to the defense program:

1. Financial capability.--Capital availability is a major contribution. While the Government has provided means by which financial assistance may be obtained, the company with its own financial strength has a real advantage in moving quickly and more flexibly than the war baby relying 100 percent on Uncle Sam. Those of you who have already

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had an industrial planning billet know how welcome was the company that wouldn't need cash advances to get rolling.

2. Management team experience.--We talk about this but are awkward in our attempts to evaluate it as a factor. Two years ago on this platform I was asked how we could go about measuring management capabilities--what scoring method could be used. My answer was to the effect that measurements of management effectiveness have been made but that they lack the precision to make them worth-while in competitive evaluation of two or more managements. The difficulty of making such an evaluation is that the measurement of people and their operating capabilities have never been reduced to a mechanical procedure as have evaluations of physical facilities. It is still a matter requiring mature judgment and a degree of management wisdom. And this is just the reason why evaluation of management contributions should be one of the most important parts of your responsibility as leaders in the military industrial planning programs.

3. Labor.--Labor, regardless of skills or lack of skill, is an important contribution. And a labor force retained as a whole, accustomed to the operating pattern of its management, is a far greater contribution to the defense program than would be the case if the workers, as individuals, scattered themselves to employment on many new jobs. We deal so much in the unswerving mathematical certainties of square feet of plant space, available equipment hours, etc., that we tend to do the same with human beings. We forget that there is a vast difference between an operating labor force of 100 workers and simply 100 more people.

Before I go on, may I point out that the above contributions are the only ones that many very successful manufacturing companies can make to the defense program. Yet I submit to you that a well-managed manufacturing labor force backed by a substantial financial capability is an extremely attractive proposition! So, as company president, I need not hang back if this is all I can offer.

If we were to match a superior management, a secure and willing labor force, both backed by adequate financial strength but with no special skills or plants to produce Product X, against a splendid physical facility operated by poor management with disgruntled workers under financial stress--I would bet on the team with superior management to reach peak economic production first.

Therefore, as president of the company I would hope that military industrial planners would give proper weight to these basic strengths of a business and not be lured into the false assumption that existence of convertible facilities is necessarily the guarantee of superior conversion performance.

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This observation is not meant to rule out the very real value of the more specific contributions some companies can make.

4. Plants.--Probably are the most publicized contribution. We may overdo our analysis of plants as a major measure of conversion capabilities. This perhaps because it is so easy to work with square footage figures and reports of plant condition. A very important contribution but only one of several.

5. Equipment adaptable to specific defense production.--This is perhaps the most important contribution that a company can make.

6. Experience and know-how.--Not many converting companies will have this in the field of their major defense endeavor--but where they do, it is of first-order importance.

Granting that we, as president of our company, have analyzed the specific contributions which we can make to the defense effort, we now have the problem of just where does our company fit into the picture? This is a problem of tremendous long-term importance to the company inasmuch as a misallocation of our effort at any early date may well bind us to an incompatible program for some years to come, particularly on the basis of the assumption that we have years of a mixed guns-and-butter program ahead of us. The importance of the correctness of the initial entry into the defense picture is one of the problems presidents of companies talk to me most about today.

In our efforts to fit our company into a sound, long-term position in a defense economy, we must remember the three responsibilities which we discussed earlier. We will have plenty of people sizing up our situation from the point of view of the first responsibility--that of producing defense apparatus for our Nation. Unfortunately this can get perverted into a sentiment that the exact production program we convert to is far less important than the fact that we convert to something--and quickly.

Having appraised the ability of my company to contribute--how can it get into a defense program? The two alternate approaches would seem to be, first, to await a specific call from the armed services, or second, take the initiative and seek out those defense requirements which my company can help meet.

It is just at this point that a rather interesting anomaly occurs. We find some successful companies, which can contribute to the defense effort, sitting back and awaiting the call from the armed services with little or no prosecution of their capabilities by themselves. The same people who cry loudly about regimentation of private industry during more peaceful times may well be the people who relax and await the complete detailing of their defense program by the Government. This apparent

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backwardness--and there is no denying that it exists to some extent--is, I think, a management reaction resulting from unfamiliarity in the defense field and an unwillingness to poke their corporate nose out at the risk of appearing militarily naive. I don't think it is because they are lazy or have any lack of desire to contribute to a defense program.

In the other extreme, we have companies which are actively developing their own programs for proposal to the military based on their own assessment of what they can best contribute to a defense economy. The wonder is that more companies do not follow this course. We in American industry pride ourselves on our ability to size up the needs of our market, to organize programs against that need, and then to go ahead expeditiously to meet the need in a sound and profitable manner. It's the same approach here. Organizations which are selfstarters in this manner are contributing to the collective speed-up of our rearmament endeavor perhaps more than we realize.

I am not suggesting that a complete "laissez faire" philosophy can be followed in the production of war material. There must be the basic determination of requirements and the policy guidance coming from the armed services through the offices which you men will occupy. What I am saying is that intelligent management should be able to anticipate to some degree what will be required of them, to lay plans accordingly, and thus move forward on their own initiative to a point of common decision with the armed services.

Now, if, as president of our company, we desire to move ahead on our own initiative in developing a general program for proposal to the armed services, what are the things to consider in investigating potential opportunities? There are many criteria which we could list, but I will note three which seem to me of prime importance:

1. The selection of a defense program matched as closely as possible to the pattern of operations, management, and facilities followed in our peacetime operations.--Lest this observation appear too obvious, let me comment upon the fact that managements and executives are as impressionable as others in the human race. The glamour of producing a high-thrust, liquid rocket engine has a high attractiveness factor which may make us forget temporarily that we would really be smarter to leave the glamour to someone else and produce field kitchens or small landing craft components in view of the level of technical knowledge in our organization and our management and employee inexperience in highly engineered product fields.

2. The diversification of our defense production to promote stabilization of operations.--If we are a large company and can take on several major projects, we should perhaps balance our efforts by production of airborne radar components, landing-craft assemblies, and

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land-mines. In this way the varying trend of warfare, which must result in varied requirements for materiel, will not leave us holding the bag in the landing-craft field if no great number of landings are to be made. If we are a smaller manufacturer with the probability of being able to handle only one or two production programs, it would be well to achieve our diversity by producing an item which of itself has a broad and general usage. Canteens perhaps--kitchen equipment--such items can give us the stabilization factor, we seek. I am not suggesting that this diversity can be achieved to the extent that there is no risk involved. I am suggesting, however, that in the conversion of manufacturing companies to defense production this benefit to management of a diversity of defense output should be recognized by the military as a sound principle to strive for, if such can be done without compromising the Nation's defense program.

3. The potential volume of the defense work must be in keeping with our potential capabilities. Once under way on a defense production program, our converted company has a certain obligation to expand our efforts if requirements increase suddenly. Thus, a manufacturer can set himself up for a very rough time if he commits himself to production programs which have a potential peaking far beyond the capabilities of his organization. On the other hand, as president of our company, it is extremely important that we at least match any loss in our peacetime volume with a comparable volume in defense production--thereby maintaining our company operations at an economic operating level and protecting the earning power of our enterprise.

I am going to skip over one of the peculiar and individual problems of every management; namely, how to go about selling its proposal to the armed services or how to lure an attractive program out of the procurement agencies. Suffice it to say that our democratic processes go to work and that out of them come contractual arrangements between the armed services and our company.

With a specific program to work against, we now move into the most turbulent period of our conversion, a period in which we lay out our detailed planning, secure or install our production facilities, go through the endless tedium of production engineering routine, man the facilities, set the operating controls, and then actually begin to move upward on the production curve.

Although most of these activities run concurrently to some degree, here is a quick list of the areas of activity in the order of their probable initiation. I have tried to make up this list out of an accumulation of similar programs on which we have worked or which we have seen carried out.

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Organization for Defense Activities

One of the greatest mistakes our company can make is to set out on a major defense program without first giving consideration to balanced organization, clear definition of responsibility, and precise delegation of authority in the defense activities. I believe that more companies make this mistake than any other single mistake. Poor organization can be a major obstacle to a more leisurely peacetime program. Poor organization can quickly swamp a defense program which, because of the time pressures and the unfamiliar nature of operations, places strains on the operating personnel far beyond those resulting from more normal "peacetime product" operations.

It is all very well to quickly pass over the matter of organization definition with the comment "We're all one big happy family here," but in my own household—and I think we're a happy family—we have some pretty precise allocation of beds, toothbrushes, closet space, etc., which are aimed at keeping us one big happy family. Good organization is not a substitute for a cooperative, friendly group of executives. It is insurance that the cooperation and friendliness can be continued on a mutually understood relationship.

The exact form of the defense organization adopted may vary widely. The discussion most frequently encountered is whether the defense activities should be completely integrated into the peacetime organization structure or whether a separate organization for defense operations should be established. If there is 100 percent conversion to defense work, the question is academic. If some peculiarity of the defense activity requires remote geographical separation of operations, there is strong reason for a separate arm of the organization.

However, it has been our thesis during this discussion that our conversion program must look forward to a considerable period during which both guns and butter will be produced, with the ratio between the two fluctuating—and this means with the work load fluctuating. Under these circumstances it appears to make good sense to integrate, insofar as possible, defense activities into the existing or peacetime organization structure. This means asking our top executives to wear two hats. It means our chief engineer will be operating as chief engineer on defense products as well as on our peacetime products.

Nevertheless, the values of this type of organization would seem to be as follows:

1. The thinking of our most experienced and capable top-management people is applied, each in the field of his specialty, to our defense program. Yet it would be impossible to release many of these executives outright to completely separate defense organizations so long as our company continues some peacetime product manufacture.

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2. All executives and key supervisors become acquainted with the problems of our defense program. Since familiarization is spread across more people, there is a broader base upon which to expand during a forced jump to all-out defense production.

3. The fluctuating work load between defense activities and peacetime production activities can be more easily accommodated. It requires only a shift in application of effort on the part of top executives and supervisors rather than a physical shift of supervisors and executives from one organization to another. (We have just as much of a problem in industry transferring executives from one division to another as you in government, believe me. We may not admit it though.)

4. By integrating our activities into a single organization we use one of our most valuable assets to the defense program--a capable and experienced management team in which the executives have learned through years of experience to work quickly and easily with one another.

I don't think we should dwell longer on this matter of organization planning, but in leaving it, let me emphasize again my firm belief that it is one of the most important factors in planning our conversion program, important enough so that it should be to the interest of the industry planning people and the military to satisfy themselves that such programs have been laid out clearly and soundly.

Financial Requirements

Again this is one of the obvious points, but it is interesting to those of us working with companies that are converting today to see how often it is not subject to complete analysis.

The requirement is to break down the anticipated defense program in such a manner as to establish the financial requirements of the program on a scheduled basis. Unfortunately, our constant repetition of a pattern of financial analysis for the familiar peacetime operations may lull us into underestimating the need for carefully looking into all possible aspects of the financial requirements on this new and different defense program.

The problem of where to get the financial support is to be considered at this time and programs for obtaining the required financing developed. Costs and profit probabilities should be projected and some provision made for building a reserve to meet the costs of reconversion at some time in the near or distant future.

I am sure many of you have at some time or another, when a seemingly simple procurement contract was being negotiated, heard the comment, "Why can't the accountants get together?" Well, it's simply because we run right past our financial people too often as we go charging on into

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the problems of physical conversion and development of the manufacturing procedures. The whole conversion program takes money and we had better be prepared to plan out this part of it early in the game and then keep our financial plans up to date.

Engineering and Manufacturing Programs

This, of course, is the area in which the most has been written and spoken. So let's skim over it rapidly. And the brevity of my discussion is in no way related to the importance of this area of the conversion program.

Engineering design of the product to be manufactured must be studied and the "how to make it" procedures must be laid out. Let me suggest that although our company is converting to a product which is engineered by another company and the other company retains the design responsibility, I should have within my company a small engineering group that understands the product design and can serve a liaison purpose if nothing else.

Space requirements must be analyzed and an allocation of existing space made or plans for erection of new facilities developed and integrated into the time schedule.

Equipment conversion or the selection and procurement of new equipment must be programmed. Tool designs must be prepared, tool manufacture arranged, and so on through the many details of manufacturing and production engineering. It is probable that in just this area of our operations we will be required to reach outside our own company for some experienced know-how if the product to which we are converting is outside our usual line of work.

Labor Allocation and Training

The requirement for estimating required manpower and the rate of manpower build-up is obvious and the calculation of requirements is relatively easy. The tougher problems in our labor planning lie elsewhere.

1. What is the problem insofar as our union relationships are concerned? What policies will we have to work out and have confirmed by the union relating to the transfer of workers to operations dissimilar to any now in our plant? Or what will be the attitude of our labor force to the importation of certain skills required in the manufacture of the new product?

2. What about our wage program? Can it be readily adapted to the requirements of our new operations or will a new or modified program be required?

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3. How about the selection of potential supervisors who can be seeded into the defense operations and so permit more rapid expansion of the work force with an increase in defense production activities?

4. Has consideration been given to using supervisors and workers who are unqualified for one reason or another for military service?

5. Our training program will be a big job. And in view of the guns-butter flexibility we are trying to build, we will not want to train a small percentage of our labor force specifically in our defense operations but to try over a period of time, to rotate a significant percentage of our labor force through the defense operations. In this way we again spread the experience and know-how and create a broader base for expansion of defense activity. This same philosophy is extremely important with our junior executives and top staff people as well.

These are a few of the areas in which we, as president of our company, must develop plans. There remains a mass of procedural detail which we have not touched on since it drops below the top-management picture we are trying to develop here today. Suffice it to say that it is easy to underestimate the sheer procedural load in moving into a defense program, yet the neglect of this load or the shoddy execution of procedural detail during this conversion period can haunt our defense operations forever after.

The armed services in their industrial planning contracts have encouraged many companies to lay out just this sort of planning in substantial detail during the past several years. These contracts have necessarily been limited to the key suppliers of important material, although in the last year or two a noticeable expansion of the program has been under way to nonmateriel producing companies which would be expected to convert a substantial portion of their capacity to defense production.

The capabilities study contract has been generally useful. The criticism which I hear voiced most often is that these studies by management are necessarily based on requirements which are soon outdated. I believe that this criticism completely misses the fundamental achievement of these contracts--the buying of management time to sit down and think through the general problems which they will meet in converting their company to defense production.

I feel extremely sure of myself when I state that a company that has creditably carried on an industrial planning study under contract to the armed forces will be able to move much more rapidly in formulating specific plans for conversion, although the quantities may be changed drastically or indeed even the product itself dropped in favor of another and unlike product. It is the development of thought patterns which has been important. The detailed data forthcoming as a result of the study should be considered as a secondary benefit only--useful indeed, but not to be considered the fundamental result achieved. So stand up for your capabilities studies.

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May I now burden you with another major problem of the converting management. It's what might be called the double-management problem.

During the last war, as we have said earlier, in many of the converting companies we had a virtual stoppage of normal activities and an almost complete swing to war or essential civilian production. What normal production continued was of such a low volume that the plant could turn it out by just running on the accumulated momentum of earlier years.

Now, if we today accept the guns-and-butter philosophy we have a very different picture. We are asking that industry continue to produce large amounts of "peacetime product." So we shall continue to nourish our domestic standard of living through the possibly long years ahead. Since this civilian goods portion of our economy will be expected to continue to move forward, improving quantity, quality and costs--we must expect to continue our basic pattern of industrial competition. In face of material shortages and substitutions, capital equipment and plant hold-ups, shortage of labor, necessary governmental controls, etc., the management load will remain large or increase in the civilian goods areas.

Yet we ask management to take on a second major load in converting some of the company's capacity to defense production. This is the double-management problem. I do not imply that management will not undertake to meet this challenge. It will, and today many executives are toiling long hours to carry this load.

It would be ideal if two managements were available to carry the double load. But there is--as you have probably heard several times over--a definite shortage of top-level management people in this country today. It's not a question of bringing up the "young comers." The "young comers" just aren't there. In the years 1940-1945, the years in which they would have been getting the all-important lower echelon experience, these young men weren't "coming"--they were "going" in an entirely different direction and occupation.

So you gentlemen should be appreciative of this problem, understand all of its critical ramifications in the affairs of the company--and count ten before you cry "Why don't you put a team of top men on the job"--or before you look askance at some of the grand old veterans who are carrying on. This management personnel problem is a tough one in face of the double load.

Some of you men may be familiar with the research study which our own organization carried on a year and a half ago with regard to management age level, and so forth. We found that the average age of the top-level executives in companies today was substantially above--seven years older than it had been in 1929. And in answer to the question "Who is coming up to take your older executives' places?" the answer was too often that you didn't have anyone.

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We've discussed the matters that pass through management's mind as it ponders the conversion probabilities, the general pattern of conversion planning and execution, and we've briefly appraised the problem of management loads and capable personnel.

Now what about reconversion safety apparatus? If we accept our assumptions on a long continuing guns-and-butter program--with the two taps, the normal product flow being turned down as defense product flow is turned up--our reconversion apparatus requirement is partially solved since we may never go completely out of business on the normal product.

But we still should consider the problem. What reconversion preparation policies should we adopt? How much dead weight in the form of reconversion apparatus should we carry during our defense effort?

I'm certainly not going to formulate policies from this platform or attempt to define limits to wartime planning for reconversion to peacetime operations, but here are a few important factors for your thoughtful consideration.

1. Preservation of Equipment and Facilities for Normal Operations.-- This seems too obvious to mention except that actual experience after World War II in too many cases showed a lack of foresight in this regard. Some of this can be blamed on the lack of a sound procedure for mothballing equipment and tools and deactivating production lines. And there was some pressure from the Government to hold plant clearance costs to an absolute minimum so that some short cuts were made which cost dearly upon reconversion. Elapsed time of conversion is the critical factor. But there is no reason why an orderly, well-planned mothballing program should block the initiation of defense production any longer than hasty, ill-considered deactivation. The plant floor can be cleared quickly-- then processing for storage proceed off the floor.

A related matter to this preservation of equipment and facilities is the need for a replacement or usage allowance in connection with equipment actually expended in the defense production. This is not just a matter of cost allowances or accelerated depreciation rates. During the reconversion period, if it is a key piece of equipment that has been expended--dollars be d---d. But get the equipment! Maybe the answer is in some sort of a replacement priority during the reconversion period-- I don't know. Kick it around in one of your seminars.

2. Accumulation of earnings to meet reconversion costs or some means of providing for these costs by direct contract reimbursement.--This was a matter of chronic complaint during the reconversion period following World War II. Perhaps the carry-forward carry-back tax provisions can help more. But that doesn't get to the heart of the problem--that efficient management deserves the right to accumulate earnings from defense efforts to finance an aggressive reconversion program. Reconversion is more than just modification of equipment and buildings. It is also recovery of

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markets and competitive position, the catching up on peacetime product development, etc. These things cost money--where is it coming from?

3. Adaptation of facilities for peacetime operations.--I'm not speaking of the costs of mechanical reconversion of facilities. I am speaking of a policy that would encourage the erection or installation of equipment and facilities under a defense program in such a way as to make them readily adaptable to the expected peacetime operations--so long as no unreasonable costs are incurred or drain on critical materials results. A defense machine shop may not need a 25-foot ceiling height, but if the most probable postemergency use of the building will be as a warehouse, let's consider the 25-foot ceiling.

4. Policy of balanced cutbacks across an industry.--During a reconversion period the "first horse away from the post" has a real advantage. The ramifications of a program of balanced cutbacks across all competitors in an industry are too numerous to discuss here--but any moves in this direction would be welcome. We plan our conversion program in phases geared to the requirements of the defense buildup. Perhaps we should give equal attention to planning our reconversion program in phases geared to the requirements of the peacetime competitive economy to which we will be returning.

5. Planning for peacetime operations.--Within the company we should permit a continuing effort in planning for reconversion. There seems to be a stigma of a sort attached to activity of this kind during a period of defense build-up. Yet good sense dictates that some such effort be maintained if rapid reconversion is to be effected.

There are many other factors which could be discussed. The matter of reconversion apparatus is a large subject and could well be the topic for a full-scale discussion at some future date.

This has been a long discussion, for which I apologize. But there is so much that a man fortunate enough to be on this platform wants to say to you men who will be shaping our country's military-industrial program in the years ahead. I've tried to make ten points:

1. That you gentlemen are going to be policy makers--top management--industry's guide. Constructive, creative thinking is your job. Make a procedural blunder--industry will get by. But initiate a basically unsound program--to whom is industry to turn?

2. That the business outlook today appears to be one of guns and butter for some time to come. This country needs both to preserve our way of life. An intelligent integration of the two is one of your big challenges.

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3. That industry has traditionally, in our free-enterprise economy, had three basic responsibilities--the tripod which supports successful industry: (a)-to the public--the Nation, (b)-to the investors, and (c)-to the employee. And all three must be eternally kept in mind if we really mean to maintain our economic and social system.

4. That the contributions of experienced management, financial capability, and seasoned work force are of equal importance in the long run to specific product facilities, equipment and know-how.

5. That one of the major headaches of a management committed to conversion is the selection of a program which will best utilize the company's strongest assets. This is a matter which calls for creative thinking, by both the military and the industry.

6. That there are certain criteria of a defense program for a company (diversification, volume, etc.) that should be recognized as desirable by the military and accommodated within the limits of feasibility.

7. That a sound conversion plan is essential in any converting company to the extent that the military should require evidence of same while at the same time forbearing the urge to actually move in and plan for the company. And organization planning is the most important area of planning.

8. That the capabilities studies contracted for by the armed services have achieved a sound result in getting management to consider in detail the problems of industrial mobilization. Don't give in to critics who complain that the detail data developed soon become obsolescent.

9. That one of the greatest problems of management is the "double management" problem of running a guns-and-butter economy. We'll do it but we'll be stretching an already thin availability of executive talent.

10. That it is sound and realistic--even as the cannons roar--to plan and provide for industrial reconversion, since one day we will be turning again to our chosen task of lifting our people, and through them all mankind, to an ever higher plane of health and happiness through the might of our industrial machine.

Gentlemen, only I can know what a privilege it has been to speak to you today. Thank you.

QUESTION: I wonder if you would expand a little more on the remark that you made during your discussion, that is, the advantage of converting 100 percent of the facilities to 25 percent of production

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rather than the opposite of converting an entire facility to defense production. It is a little hard for me to understand. The items I have seen discussed in the papers say, for example, that General Motors is going to take one particular factory and set it to defense production. How do you apply the other theory?

MR. POCOCK: Well, I am not thinking so much of physical equipment and the facilities as I am the total capability of the corporation. Take General Motors, for example--General Motors during the last war was shut down on all civilian production and went all-out into military production. All of its administrative people, executive vice-presidents, were given transfers and shifted over into military operations completely. It is true that they will shut down--as they are planning to do in Kansas City--one plant and convert it over. But the point I make is that it will still continue to maintain automobile production in other plants probably for some time to come so that the top executive group--say--is 25 percent converted.

There are a few big companies pretty well lined up to convert. But take a medium-sized company of a 50-million capacity, a company that has one, two, or three plants--most of them have one big major plant. I think of an appliance manufacturer with a volume a bit above this figure which is following along this partial conversion line, putting aside a portion of his plant for military production--it happens to be jet engines. He will continue to turn out appliances insofar as limitations permit him to turn them out, but the point is that he will have a large enough defense production going so that he can rotate his people to the defense program. Then if he has to go 100 percent, all-out conversion, he can expand his defense operations and can do it much more easily than if he had none in there today.

Kaiser-Frazer is getting into the production of the Fairchild Packet but will continue on automobiles, and so forth. I certainly don't want to comment one way or the other on the advisability or inadvisability of any specific program but it does give us a wider base from which to expand. In this way more people in more companies will know more about the problems of defense production when you have to pull out all the stops. We can go a lot faster then--that is what I am getting back to. Does that answer your question?

QUESTION: I was thinking of it as an individual plant; but the over-all company I understand.

MR. POCOCK: I think the same thing works out for the individual plant. You can plan out that way so you can keep present facilities working, part on defense work and part on peacetime work.

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QUESTION: You spoke of the desirability of 25 percent of this industry in terms of defense production it will turn out as a reserve to the company. Isn't that essentially contradictory to the needs and objectives of the armed forces? We have the Munitions Board trying to allocate plants to produce specific products. It would seem from the military point of view that is the desirable objective which seems to contradict the one you mentioned.

MR. POCOCK: That is why I mentioned it. Yes, you are exactly right. I think a lot of the industrial planning today has been based on the thought or feeling that it is a lot simpler to take a look at the larger company, larger facilities, having three million square feet and put the product there and let them run all-out on this particular program. Surely, it is simpler to have one company make all the fuel gauges, let us say, right now, but from the standpoint of the president, the management, the stockholders, they have to look forward toward stability of operation for a number of years ahead. They are interested in any way at all that they can get diversification of their defense output which will stabilize or help stabilize that company. I recognize the simplicity of being able to plan full facilities to a particular program, which is directly opposite from what I have suggested. I am not saying a fellow should stick to diversification to the point where he compromises major defense programs or booms costs up terrifically, anything like that. I am saying at least let us recognize that this is desirable and it is sound from the management standpoint. Of course, in peacetime, diversification also is one of the big problems always in front of the management. General Mills got out of the milling industry and went over and made electrical appliances to get diversification.

QUESTION: Yesterday's "New York Times" contained in its Business Section an article on the proposed expansion of the steel industry by 15 percent and it quoted most of the leading management figures in the steel industry to the effect that this expansion might be undesirable since it doubted the capacity of the country to consume that much steel under normal circumstances. I wonder if this type of thinking represents any important element of American management, whether we can in fact have guns and butter?

MR. POCOCK: We were chatting a little bit on that general problem just before I came down here. I think there is a little bit of dragging of feet on the part of management just because of the uncertainties of the future. You see the last real occasion that we had over a period of peacetime to test the capacity of this country to absorb a product was in the depression and postdepression period of the thirties. Since that time we have had a tremendous inflation of the capacity of this country to absorb a product but I think a lot of managements today still have to rub their eyes to believe that the country can really take this production. The demand is there if we could go ahead and provide for it.

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This statement becomes purely personal prejudice from here on. I feel that this Nation's economy can be rather quickly geared--and I don't mean in months but in a period of five, six, or ten years; I say that is a short period in the long view--to provide a continuing defense establishment with considerable potential there and still keep on producing up to the civilian requirements so that we not only maintain but continue to increase the standard of living. I think it is largely a problem of throwing a challenging situation to industry and in a period of relatively few years we can meet it. I am not an authority on the steel capacity. I know there has been that figure and of course whether or not 15 or 20 percent increase can be absorbed readily, whether it will prove in the long run that it will pay off, I don't know, but I suspect once the steel is there, a lot more people will use it than steel management has recognized. I think they are recognizing it now or they wouldn't be considering the 15 percent expansion. I think we can have a dual economy. I think we are going to have it. I think we will be very much surprised in how we can carry it out.

COLONEL KLEFF: On behalf of those present, I thank you for a very fine lecture and discussion period.

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