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The Principles of Command and Logistics

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THE PRINCIPLES OF COMMAND AND LOGISTICS

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Admiral Conolly, students of the Naval War College:

It is a great privilege for me to come here this morning. As a former student and loyal follower of this college, I appreciate the continuously constructive effect that its courses of instruction have contributed to the overall effectiveness and efficiency of our Navy.

In discussing the subject assigned to me "The principles of command and logistics", I feel that it is advisable to present the picture, as I see it, in three phases. First: pre World War II, second: during World War II, and third: post World War II.

When I was a student here in 1936, there was very little consideration given to the subject of logistics. At that time we in the Navy had, as we have now, a fine supply corps. Our supply officers were men who had a good knowledge of how to get things, when to get them, and how to distribute them, but the average line officer took very little active part in such matters and in fact there was a tendency to avoid them if possible.

To a considerable degree, we fought World War I under these circumstances. The system worked with reasonable efficiency because of the relative simplicity of that war from a logistics viewpoint. First of all, it was a war with but one major theatre

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of operation. Accordingly, there was but one major pipeline of supply—from the Atlantic coast of the United States to Europe. Furthermore, although the production capacity of the United States was taxed, it was in general adequate to meet essential demands for the timely support of our forces in the operational areas.

Therefore, during the period between World War I and World War II the assurance of the adequacies of our methods and organizations continued, and the need for logistics planning to become integrated with the operational planning was not emphasized.

But when we entered World War II we found that instead of one major theatre of operations, there were eleven. We found that the production capacity of the United States was, in many important elements, inadequate to meet the magnitude of the worldwide demand. We found that, instead of having plenty in order to carry out our planned operations, we were forced to exercise the greatest economy in the use and distribution of our materials, and that we were able to undertake not more than fifty percent of the desired strategic operations.

Thus, we entered World War II unprepared to handle these complicated problems and to coordinate fully the operational and logistics planning and timing which we found to be essential to success. We learned quickly that logistics planning and control must be definitely considered as a "command" function and we were forced to the realization that a knowledge of the principles of logistics is a necessary qualification for the command of military forces. Admiral King, our great wartime Chief of Naval Operations, was one of the first to realize our weaknesses in these respects: and it was he who initiated the important action and

policies that lead to the adoption of the principles that logistics planning and control was a function of military command: that the closest coordination between our strategic and logistics planners was required, and that such unification of effort went far beyond the requirements of the Navy, but involved unification of such effort among the military and civil services of the United States, and further that such unification must include the planning and operational requirements of our allies.

Because our problems and experiences of World War II brought into the foreground new and continuing problems of command and logistics, I will dwell at some length on this period of our military history in trying to present to you the principles and procedures which we found to be sound and to emphasize to you some of the procedures of days gone by that proved to be fatal or at least destructive of maximum effort against the enemy.

The first thing that I want to emphasize is that logistics considerations belong not only in the highest echelons of military planning during the process of preparation for war and for specific wartime operations, but may well become the controlling element with relation to timing and successful operation.

There are two kinds of logistics planning agencies. One is attached to the staff of the Operational Commander and takes part in the formulation of operational plans and assures their feasibility so far as logistics is concerned. The other type is attached to the implementing logistics organization which is charged with the support of the operation after it has been approved. Although the former type may often times control the approval, timing of extent of operational plans on a basis of feasibility or infeasibility, the latter type is always the slave of such approved plans and *must* implement them in an adequate and timely manner.

If the Operational Commander includes within his command the direct control of logistics organizations sufficient to support his operational plans, he may not be required to submit such plans to higher authority for approval. On the other hand, if he does not command and control such logistics capacity, then he is forced to submit his plans to such higher authority as may control adequate logistics support.

Thus, during World War II a system was set up whereby the commanders of the major theatres of operation submitted periodically to the Joint Chiefs of Staff and the combined Chiefs of Staff their plans for the pursuit of the war within their various theatres of responsibility. At Cairo, for example, these plans were received and each was considered from the broad angle of "does this suggested operation in such and such a theatre take a proper and advantageous place in the early and successful completion of the war?". If, from a strategic and operational viewpoint and the objective viewpoint, there was approval, then it was laid aside as an approved strategic or operational plan for further consideration in regard to the feasibility of support of all other approved plans.

Again referring to Cairo, I could not tell you the exact number of such worldwide operations that were approved from this objective viewpoint, but my guess now would be that there were approximately 28 to 30. These plans were then all referred to the very extensive logistics planning organization then attached to the Joint and combined Chiefs of Staff. Thirty-six hours later these plans had been examined for feasibility for supply of personnel, material, shipping, manufacture, etc. and the Joint and combined Chiefs of Staff received definite recommendations as to approval or disapproval and as to timing on this basis. At Cairo, the total number of approved plans was thus reduced to approxi-

mately 14, and in order that the greatest effect might be obtained from existing logistics facilities, the timing of approximately 8 of these operations was changed.

For example, plans for the Normandy operation as submitted specified May 4th, 1944 as the date of commencement. The landing by MacArthur in the Philippines was planned for July first. These two major operations, requiring the greatest output of American industry in certain respects, (such as landing craft and the availability of shipping), could not be undertaken on dates so close together. Therefore, the landing in Normandy was approved for 5 June, 1944 (the earliest date on which the required support could be made avialable) and the landing in the Philippines was delayed for approximately 4 months to allow American industry to make the necessary deliveries and to permit the use in the Pacific of the same shipping that had delivered the bulk of the supplies to the British bases for the support of Normandy.

It will be noted that these decisions could not be made either by General Eisenhower or General MacArthur because neither one of these commanders had sufficient logistics agencies under their direct command and control to permit their independent action. Therefore, they, in accordance with sound principles, submitted their plans and requirements to the Joint and combined Chiefs of Staff, because the latter agencies were the only ones with sufficient logistics authority to ensure successful and timely support.

I think this general and brief outline is a good example to show the place that logistics planners assume during war or during the time of any very extensive preparation for war.

I wish to impress upon you, gentlemen, that one of the lessons that I have learned at least is that wastage of material

or production effort due to indifferent or uncoordinated planning or due to the unilateral demand of one agency without consideration for the requirements of others, has no place in successful military planning. As a corollary, I desire to impress upon you, that neither in peace or war will there ever be enough of everything to meet what would appear to be justifiable demand.

We had an example of unilateral planning during the war which might interest you. It brings out another point, that when we talk about unification of the Army, Navy and Air Force, that is the least we can expect. We must go further than that. We must not forget that during the war we had to allocate steel, machinery, and engines to the Maritime Commission, the Department of Agriculture and to all the other supporting civilian agencies that provided us with food, transportation and the other essential requirements, not only of the armed, but civilian forces of the United States. Thus unification of effort of the armed services is the minimum requirement. It is expanded in time of war, to include civil activities, and directly affects military planning by affecting the availability of men, materials and facilities.

The Maritime Commission was a separate agency. It had no representative on the Joint Chiefs of Staff. Emory Land, a naval officer and constructor of high integrity and ability, commanding the respect of everybody, went to the president and got the president to sign an executive order allocating 60 percent of all plate steel to the Maritime Commission for the construction of merchant vessels. Therefore, 40 percent of the plate steel, which, of course, was a critical item, had to be divided between the Army, Navy and Air Force, and all other supporting agencies. It was inadequate. Plate steel was one of the most critical items during 1942 and 1943. There was a unilateral decision which was a serious one.

The steel industry resisted the production of plate steel above a million tons a month. Therefore, we were going to Cairo, with 400,000 tons of plate steel, knowing that the war effort was going to be completely curtailed unless the steel industry would agree to increase its production or a change was made in the percentage of steel plate devoted to the Maritime Commission and/or the Army, Navy and Air Force. It was brought into unison by an interesting thing. Since I have gone this far, I will tell you the story.

A proposal was made to the Joint Chiefs of Staff just before we went to Cairo that, in December of that year, the allocation of steel plate would be the same, 60 and 40; in January, it would be 55 and 45; in February, it would be 50-50, and there it would stay. I happened to be in that picture and was asked by the Joint Chiefs, " Is 50 per cent of the steel plate enough for the Maritime Commission? " I said, " No, not 50 per cent of a million tons. But 50 per cent of 1,200,000 tons is adequate and it will be adequate for the armed forces. " The attitude of the steel industry had been affected in the fact that the principal consumer, the Maritime Commission, was satisfied. Although the Army and Navy were strongly complaining about the production of steel plate, the complacent Maritime Commission was getting enough, was rather silent, was not a party to the effort for increased production. If we put this new order through over the president's signature, we were going to have the Maritime Commission also protesting strongly. We predicted that under these conditions that before we arrived in Cairo, the steel industry would be under such pressure that it would agree to increase the production of steel plate. The order was signed by the president. We went to Cairo, and the first dispatch on the top of the pile that I found on my desk was one from the deputy in Washington saying that the steel industry had agreed to increase

the production of plate steel to 1,200,000 tons in February, in spite of the fact that it was only a 28-day month.

On that basis, we were able to approve, that year, Normandy, the south of France, and the Philippines. Had that increase not resulted, certainly the Philippines and probably Normandy would have had to be reduced below essential requirements or delayed for a period of a year because even with the increase, there was a leeway of only 100,000 tons in the Cairo plans in regard to plate steel.

That gives you an idea of the danger of a unilateral demand; in this case, on the part of the Maritime Commission. It applies equally to the use of political power, lack of teamwork, and failure to consider the needs of the other fellow in the team and how disruptive it can be to him. Therefore, it is to be avoided because we do not have enough in war; and we must exercise, as I said before, not only economy but teamwork so that distribution is in line with the greatest effort of all concerned.

Superfluous or unnecessary demands by any command are to be avoided. As an example of this, the British came over with a demand in 1943, I think, for 95 repair ships and a 100,000-ton drydock. We told them, yes, we would give them the necessary support, although it involved a great deal of critical material, but that we would have to break it down to see how much they actually needed in the support of approved operations. Briefly, when we broke it down, we could not justify more than 15 repair ships and no drydock. There was considerable political pressure on that. As a matter of fact, on that occasion, I was called to the White House and Mr. Roosevelt said," You are apparently treating the British pretty roughly." "No, Sir," I said. "We are giving them all that is justified to carry out approved operations and

to that they agree." This was a demand which, in its desire to build up to the possibilities rather than to the realities, represented the difference between approximately 100 per cent and 15 per cent on extremely critical naval construction which affected, in its turn, air and other construction. It illustrates the point that superfluous demands on the part of one military agency may and probably will diminish unnecessarily the capabilities of other commanders elsewhere.

I got into trouble with the Air Force on a question involving *faulty planning and thoughtless demands* against other programs, which is to be avoided as poisonous to all-out effort. At one stage of the war, the Air Force and everybody else, realized the importance of the B-29 program. So the Air Force came in and requested that the B-29's be constructed *under over-riding priorities*. Under that priority, people interested in a program could go into any factory or any production program, take out any tool, any workman, take over any factory, and divert any material for the construction, in the case I am referring to, of B-29's. It was not a question of the B-29's in and of themselves. It was a case of trying to build something without a plan. There was an idea that this privilege of getting these things in this manner without delay would expedite the construction of the B-29's.

We fellows who had to make the recommendations were strongly against over-riding priorities, but we said, "If you will submit a plan of requirements, we guarantee highest priority of all requirements, and we believe that under such a plan more B-29's, rather than fewer, will be produced. Furthermore, such a procedure will not affect the programs of other type airplanes which are being utilized and which are, in their particular cases, essential to the pursuit of this war."

Results proved that the B-29 program proceeded expeditiously and did not interfere with the production of other essential planes.

I mention that as a reason for not getting too enthusiastic about the needs presented by one service over the needs of another service, or the demand for one type of ship, plane or whatever it might be, without due consideration of the effect of overemphasis on that type on the other types which, in their minor roles, are nevertheless essential.

Logistics, on the scale of a world war, is truly a highly complicated subject which involves procedures and operations beyond the ordinary appreciation. On the other hand, the determination of feasibility of plans even on a worldwide scale, is comparatively simple because certain essential items are always more difficult to produce in adequate quantity than others and, therefore, these items become classified as critical and are the ones that form the " bottlenecks " so to speak, in the determination of feasibility.

During World War II there were always between 10 and 20 essential items that were always short of the overall demand. These included shipping, landing craft and engines, steel plate, electronics, aviation fuel, machine tools and a few others. It is obvious that if these particular items were in shorter supply than all of the thousands of others on the essential lists, that the overall feasibility of operations could be, and was, definitely determined if these critical items were available in sufficient quantity to support the plans approved by the high command. In simple terms, if a landing craft engine was a rarer item than a truck engine, the feasibility study gave consideration to the availability of the former and assumed that the latter could be supplied in sufficient quantity.

In supporting an operation, there should be no such thing as 90 per cent supply of essential items, or 95 per cent, or even 99 per cent. It should be 100 per cent or else the operation can be conducted only at a risk of failure. I have seen, in my experience, officers inclined to boast about fleet supply ships being sent into forward areas with 93 per cent of the supply items on board. They were surprised when I showed a high degree of dissatisfaction. Experience had shown that the very seven per cent of items that were missing because they were semi-critical and in short supply in the home ports would be the very same items which would be in short supply and most urgently needed by the forces to be supplied.

In your considerations of the relationship between operations and logistics planning and control, I recommend that you become accustomed to thinking in simple terms. Remember that the objective of logistics coordination and effort is always toward support of the operational readiness and operational capacity of our forces. Approved operational plans always define the degree and timing of both of these factors. Therefore, it is essential that all logistics effort be patterned toward the support of such plans. Since these plans are always formulated by the military command, it is essential that operational and logistics planners work together under the operational commander concerned in the formulation of these plans in order to ensure their practibility and feasibility of execution.

During the period of World War I, the intervening period between World War I and II, and during World War II itself, we provided the organizations and means for the support of existing operational plans. I have pointed out that we changed our methods somewhat during these periods, and I have tried to give you the reasons why this was necessary.

Now to divert for a few moments, I feel it advisable to discuss the period between the end of World War II and the declaration of the present national emergency by the president.

During this period, under the impetus of demobilization and economy we forgot in some instances the lessons learned during World War I and withdrew in some respects the control of the military command over logistics activities and gave the priority of control to the logistics agencies themselves. In many instances during this period this procedure resulted in withdrawal of essential logistics support from the needs of our responsible operational commanders.

In China, for example, there was very little close relationship between the amount, the kind or the timing of the support that we gave to that nation to meet their operational needs. In fact, there was so little relationship existing that in many instances the Chinese were unable to make any plans which included the use of American aid because they were never sure as to what was going to be supplied or when it was going to arrive.

In the eastern sea frontier, a military command responsible for the support of a considerable part in the execution of operational plans involving security of the coast and shipping in the western Atlantic, the establishment and support of overseas bases, the expanded logistics support of the Atlantic Fleet, and other wide responsibilities, the state of readiness to support or execute approved operational plans steadily deteriorated. The readiness of ships and of logistics activities to carry out their respective missions as defined and laid down in approved plans and directives, deteriorated to such a degree that such plans became merely scraps of paper setting forth requirements and timing completely infeasible to accomplish.

I am happy to say that the declaration of the national emergency and the statement of policy of our Admiral Sherman "to conduct our business through the military chain of command" this state of affairs has been rapidly corrected and the state of readiness of our forces and activities rapidly improved.

Nevertheless, these four years, where we forgot to a considerable degree the need for closest coordination between the operational and logistics planners and authorities in support of feasible operational plans constitute a realistic warning against future abandonment of the basic principle requiring the closest coordination between these activities in the support of the strategic and operational plans under the military commanders responsible for their execution.

All that I have said regarding command, logistics, feasibility, adequacy and so on, is basic and taken as a matter of routine in our day to day operations of a single ship. For example, the Captain issues orders to get under way at such and such a time for such and such a destination. He has received assurance from his navigator that the distance is within cruising range of his ship: otherwise, he must provide for refueling en route. He receives a report from his gunnery officer, his engineer, his supply officer and other heads of departments, that his ammunition, his fuel, his stores and his personnel are on board, as directed, and sufficient to carry out the operation: otherwise he must provide for timely replenishment. Here is a simple responsibility resting on command with regard to logistics. If you will think along these simple lines in the consideration of more complicated questions, I am sure that you will ordinarily find that the principles involved are the same.

And, finally, before I close, I should like to call to your attention one of the most important, *if not* the most important,

principle that is involved in the command responsibilities of producing plans and directives that are sound operationally and also feasible of logistics support.

In my opinion, there can be no action or evaluation on the part of any supporting logistics agency that will lead to greater or lesser meticulous care in the support of one part of an approved strategic or operational plan over another. To grant any discretion to such a supporting logistics agency regarding the need for support of any phase or part of such a plan is a fatal defect and, sooner or later, will result in disaster. All approved operations, large and small, regardless of geographical location, must be regarded as essential components in the overall effort and the means must be provided for timely success in each case.

If the occasion arises when the logistics supply agencies find it impossible to render required services at the designated times, they should refer such facts to the responsible command for his decision and action. Obviously, such information affects the determination of feasibility and may require his reconsideration of his plans and of their timing. On the other hand, if he has determined his feasibility properly, such a negative report from a supporting logistics agency may mean a deferment of other projects of less urgency in order to provide the means available to go ahead with the support of his plans.

During the war, such action was repeatedly necessary in all echelons of command responsibility.

As an example, the demands of the Cairo decisions required the increase of landing craft and engine program by about 300% for about four months. When the Bureau of Ships was confronted with this problem they required a very considerable

increase in plate steel allocations and engine manufacturing plants and mechanics. They reported their additional needs to CNO, who in turn took the matter up with the Joint Logistics Staff who, in turn, proposed deferments in programs of trucks and other less critical items, and thereby assured the timely delivery of the required landing craft.

Thus, the important principle which I wish to emphasize, involves the complete subordination of logistics supply and manufacturing agencies to the meticulous support of approved operational plans. They must be uniformly imbued with a "can do" spirit and must under no circumstances exercise any independent judgement or thought regarding the relative importance of or need for supporting approved operational plans. We found by repeated experience during the war that the exercise of this principle was essential to overall timing of large and small approved operations, wherever they might be located geographically, in order that the planned effect on the enemy of worldwide operations might impose on him the maximum diversionary pressure and the maximum strategic disadvantage. Such considerations properly belong with the High Command and under no circumstances can they be justifiably controlled by judgement or actions or any supporting or subordinate agency.

These are the reasons why operational planners and logistics planners must work together, think together and even sleep together, in the attainment of the perfect coordination essential to the maximum effort. These are the reasons why any operational plan before approval must be meticulously examined for feasibility and approved only after the practibility of full and complete support have been determined. This is the reason why the Joint Chiefs of Staff must maintain sufficient controlling influence over the priorities of production and industrial and per-

sonnel allocations, to permit the adjustments necessary to maximum military effort; and this is the reason why the Chief of Naval Operations must exercise control over his logistics bureaus and agencies and all fleet commanders over their service forces, in order that they can assure their subordinate operational commanders an unfailing and adequate supply of facilities and support essential to successful execution and accomplishment of the operations with which they are charged.

These principles apply in my opinion in peace time when the overall limitations to the attainment of military readiness for war are expressed in terms of the taxpayer's dollar: as well as in war time when military accomplishment and intensity is limited by the industrial capacity of the nation. Neither in peace nor in war will these limiting factors permit sufficiency for all the things that we would like to do for the defense and security of our nation. But because these limitations do exist and do constantly impose on us the need for expending our effort in the most constructive and effective manner, our organizations, in peace or in war, must embody the means and determination to attain the maximum coordination between logistics and operational planners. Only in this way can our performances reflect the fact that we have "done the best we could with what we had."