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DISTRIBUTION PROBLEMS IN THE THEATER OF OPERATIONS

23 January 1948

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DISTRIBUTION PROBLEMS IN THE THEATER OF OPERATIONS

23 January 1948.

COLONEL HORNOR: Gentlemen, I take great pleasure this morning in welcoming to the College one of its former distinguished graduates, General Raymond G. Moses. His subject this morning is "Distribution Problems in the Theater of Operations." I know of no one who can give us a better picture of the problems that were faced during the late war; he was G-4 of the 12th Army Group; and after the war, he wrote a history of logistics in the European Theater of Operations, - General Moses.

GENERAL MOSES: Captain Worthington, General Gay, Colonel Hornor, Gentlemen: I do not think I was too distinguished when I graduated from this College a number of years ago. I might correct another statement. I did not write the history; I had a great deal of good help. However, my name was probably at the top of that particular document.

It is a great pleasure to be back here. I am glad to see so many friends and to be able to say hello to them.

The distribution of supplies anywhere, it seems to me, depends principally upon two very important things. The first one is the transportation available to deliver the supplies and the second the organization for the purpose. The organization includes the personnel making it up, of course, and is not confined to the operating organizations that have the function of distributing supplies but comprises also higher headquarters which determines what those operating organizations do. There are many other factors that are important but it is my opinion that our biggest problems lie with these two.

I have no doubt that the members of this College realize that there are differences in the problems of distribution of supplies in the Zone of Interior and in the theaters in time of war. Most of you after graduation here are more apt to be engaged with the problems of the Zone of Interior rather than those of the theaters, but I believe that it is essential for you to know something about the problems in the theaters and the relation of those problems to the Zone of Interior. You have had talks on the distribution of supplies or on distribution systems recently by Colonel Hornor and Admiral Luck. No doubt you have read or heard a great deal pertaining to the Zone of Interior problems.

I have been away from Washington for sometime and know little of the progress made in the plans for a unified command but I have heard of efforts to solve the problems pertaining to the Zone of Interior, especially to procurement, industrial mobilization, distribution and research.

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In the Zone of Interior it is very important in peacetime to consider economy in funds and personnel. It is essential that we obtain the maximum preparation within the money and the directives authorized by the Congress. However, we must not imperil our actual operation in time of war by operating in the Zone of Interior in time of peace with an organization that does not fit into what we must have in the war theaters. In these days of unified Armed Forces thinking, we should assure that under the single commander of a theater for all Armed Forces the organization is such as to enable him and his forces to operate with a maximum economy, and that our Zone of Interior organization fits into the theater organization. I doubt that much thought is being given to this.

In the theater organization I include not only the administrative and supporting organization for the operations but the entire theater organization from the top commander and his staff down. Through necessity the organization to accomplish our objectives in the theaters is of a military nature and is apt to be made up of forces of all three of our major commands--Air, Navy, and Army. Local civilian personnel, of course, may be used if available and suitable, and we may have prisoners of war, but we must count only on military forces in our plans. The theaters are the areas of the pay-off. It is there that we win or lose our objectives, conserve or waste lives, material, or money--lives being the most important element. We should start our organization thinking in the theaters for both the fighting forces and for the support of the fighting forces. We should then see if our organization in the Zone of Interior fits in with the theater's necessary organization. It seems to me that we did not do that in the War Department when the reorganizational of March 1942 was accomplished, and as a result there were organization difficulties in the theaters throughout the war. It is easier to fit our Zone of Interior problems into the over-all effort than it is to fit those of the theater into that effort, when they are influenced principally by the Zone of Interior problems. At best it will take years of education and much effort toward understanding the terrific need for economy of effort and self-sacrifice before the Armed Forces can be a real unified command in a war theater of operations.

The ability to accomplish the objectives pertaining to proper distribution of supplies is dependent primarily on the organization and the transportation available. The commander must know what can be done in the way of administrative support of the desired operations and what the risks are. He is the one to decide whether to take chances and just what balance there must be between the combat forces and the supporting forces. He distributes the means to accomplish the missions assigned to all the forces--transportation being the principal means. I would like to say here that in referring to the combat forces I include both Air Force and Army Force, and the Navy where applicable. All three forces may also be included in the supporting forces. My talk is more

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applicable to ground and air operations but the principles apply in any operation.

What are some of the things that affect the problems in the theaters that are possibly different from those in the Zone of Interior, or assume greater importance? Time in war is important everywhere but the timing of what one does in the theaters is possibly more important than elsewhere; as it directly affects all problems. We make plans in time of peace, or at least we have in the past and I assume we will in the future, for possible operations. These plans determine the items and the quantities desired in the theaters for daily use; for losses which we may have from enemy action, weather, natural waste, conditions in handling, for allowances for the known factors in the transportation of supplies to the theaters and the uncertainties in these factors; for our own operating purposes within the theaters, such as the establishment of stocks to allow for transportation irregularities, selectivity, the actual handling of supplies, errors, etc.

However, except possibly at the very beginning, operations are seldom carried out by large forces exactly as planned. We must allow, therefore, for such changes in the items and the quantities that may be needed at various times and the facilities to meet the new problems involved. A relatively small area to be captured may be the only objective for an advance airbase, from which it is planned to launch strategic air missions; but in such case there are no major problems of distribution after its capture. Let us assume that our forces move forward and the area initially taken by our forces is continually expanding. We must get the maximum in economy of effort, particularly in the use of the transportation and the personnel available. Planning in this case for continuous operations well into the future is very important and involves careful attention to the timing of the details of supporting operations.

In the original plans no doubt we would consider the matter of the location of our reserves or operating stocks and whether they should be near the ports and airfields receiving materials from the Zone of Interior. Considering both the points in the theater where supplies are received from the Zone of Interior and the points of delivery of those supplies to the various commands, how far forward should these stocks be for economy of operation, particularly of transportation? In this connection what is the kind of transportation available and where is it with reference to our loading and delivery points, whether the transportation be ground, air, or water? At what speed will our transportation travel and will it be able to travel at all times? What are the communications like? Is there telephone, by wire, or radios? The communications in any case are likely to be poor compared with those in the Zone of Interior. Such things would be reasonably well known in the United States, but in the theaters they are apt to be affected by many unknowns.

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Roads, rail lines, and waterways may be damaged by the enemy. Airfields probably will have to be constructed. Enemy action may interfere with the construction or reconstruction of the facilities needed and with the operation of the facilities. With relatively poor conditions anyway, the weather may decrease the efficiency in operating transportation. What will be the flying conditions? How will the operating personnel be affected by the housing conditions? Will there be cover for the supplies and hard standing for equipment? What is the condition of the loading and the unloading areas? Is there mud in such areas or are they paved? Our operations may be affected adversely by the necessity for concealment by day or by night. Obviously some of these factors must be considered in the Zone of Interior also, but all of them and many more definitely must be considered in theater operations in most cases.

The future of the operations which are being undertaken must be considered in our planning. The larger the forces and the higher the headquarters the longer the period covered in our administrative plans must be because of the effect of the time element, especially on transportation, organization and location of installations. Those responsible for planning the administrative support should try to determine what the commander's plans are for operations possibly two, three, or four months later, on which tentative administrative plans may be based. The chances are that actual operations at a later date will be different from the planned operations but, based upon all the information obtainable, the administrative planner must determine the allowances for contingencies as well as possible and he will be lucky if he can get much definite information on future operations. He will be interested also in the probable speed of all the forces concerned because such speed directly affects the timing of the supporting forces' operations. Is it probable that some ports will have to be abandoned and new ones established for the receiving of materials from the Zone of Interior? Is this true also for our administrative air fields? The effect of such action on the location of our large stock centers must be considered. What is the effect of the operations on the distribution of the supporting organization and the locations of its various headquarters? It almost goes without saying that the expanding area will present problems of extension of transportation lines and organization for general administration of the area.

It is easy to see that administrative plans must be as flexible as possible. However, we cannot prepare for all possible contingencies and at the same time be properly prepared for the planned operations--there is too great a shortage of transportation, trained personnel, equipment and supplies. The problems involved must be thoroughly understood, possible solutions determined, and then command decisions made on what will be done and how. The decisions very likely will require that administratively the immediate objectives are the first to be supported,

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with allowance for changes made to the maximum degree practicable. I will illustrate some of these factors briefly by using as an example the early operations in northern Europe, and I would like you to keep in mind the importance of consideration of organization and transportation in the decisions made and in the effect of the decisions on those two items as well as the general logistical situation.

Plans were made for the organization and the transportation needs for the combat forces, both Ground and Air, the Navy forces, and supporting forces for the first phase which included the occupation of the lodgement area. This was the area the occupation of which was necessary for the security of future operations. The area was bounded roughly by the Seine River, the Loire River, the Atlantic Ocean, and the English Channel; we were to obtain it within about 90 days, or about the end of August. All three Armed Forces were involved in this effort but only the Army and the Air Forces were to proceed inland at this time. Cherbourg and an artificial large port in the Brittany Peninsula were to be in full use by the end of the period or phase. Assuming that there would be continued strong opposition by the enemy we were then to pause in order to prepare our combat forces for the next phase and to put our administrative support situation in such a state that the combat forces could be sustained over a long period as they moved forward. It was apparent that for further progress against real opposition we would have to properly locate and build up our reserve stocks, and have our lines of transportation, particularly rail, fully organized and ready for the greatest possible extension. The amount of transportation of all kinds to be available was definitely limited.

Our early operations did not go so fast as we had hoped and you no doubt remember that near the end of July we were still a relatively few miles inland with our forces. There was a small space only behind our Ground and Air combat forces available for administrative installations, particularly supply establishments. Also, since the fighting had been severe and the advance slow, the ratio of the combat forces to the supporting forces placed ashore on the continent was decreased below that planned. During this period there was an evident greater need for combat forces but with the break-through near the end of July and the enormous expansion of the area in the following month, the picture was entirely changed. As the end of August approached the initial objective of occupying the lodgement area, with the exception of Brest, had been completed and our combat forces were spread all over that area. The administrative support situation was considerably worse at that time than was expected under the plans. You all know that the resistance of the enemy at this time was not strong and in fact the enemy was on the run. This situation was foreseen early in August and it was evident that a decision on a change in plans would be needed before the end of the month.

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What were the factors on the administrative side affecting such a decision? In the first place the rail lines had been extended very little and the equipment was exceedingly short. The combat fuel lines for both air and ground use were behind schedule in extent. The motor transport for the support of the planned forces was insufficient for the lodgement area alone, and air transport could not possibly make up the deficiencies. Communications lines were well behind those desired. The experience of the supporting organizations was short and those organizations had been working to the utmost to keep up with the enormous expansion and daily supply only, with no time to develop an orderly and economical supply situation. I need hardly tell you that even if the combat forces are stable in size, as operations progress the air and ground supporting forces normally have to expand to accomplish their missions.

Every mile of advance of the combat forces beyond the lodgement area under the conditions existing at the end of August would decrease the total possible deliveries of requirements to all forces on the continent or would cause a postponement of work in the rear areas necessary for efficiency in the support of future operations, or a combination of these adverse effects. In other words there would be increasingly poor results for all concerned under a continued advance. The prospect of a fast advance of the combat forces meant that transportation facilities of all kinds would be used for the fast movement of the forces, much of which was needed for and planned for the work in the rear areas, including the distribution of daily supplies. Since the rehabilitation of rail lines and equipment and the placing of trains into operation under war conditions are slow processes, greater relative dependency for further advance would have to be placed on motor and air transportation. Many other factors entered into an estimate of the logistical situation for the support of the prospective rapid advance and for the effect on the eventual logistical situation if the advance were made. The few that I have mentioned are sufficient to indicate that a continued advance and especially a fast one would make the entire administrative support situation increasingly worse until the length of the lines of communication could be reduced. The reduction of these lines was contemplated through the capture in the advance and the rehabilitation of ports further forward, and the establishment of airfields in forward areas. However, the effect of these benefits was not expected to be felt for a considerable time.

I have not mentioned tactical and strategic conditions, but there was no doubt in anyone's mind as to the advisability of proceeding as fast and as far as possible against the enemy without regard to the eventual bad effect on the logistical situation.

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I hope that what I have said so far convinces you that there are problems in distribution of supplies peculiar to theaters. The so called Battle of the Bulge presented a considerable number. There were problems in the Pacific and elsewhere involving the same fundamental factors, with water transportation in some cases being predominant. I would like in my remaining time to emphasize some of the important considerations. First, I will mention again organization. Supporting organizations must be, of course, technically competent and of proper size. They must operate with maximum economy and must fit into the theater organization. The general theater organization must be in accordance with the principles of command and this is especially so when we consider the present day problem of a unified command, although it was present during the war. It is imperative that the commander not delegate any important function of decision affecting two or more commands to any one of the major subordinate commands. Each of the commands may include elements of our three Armed Forces, but each command must have definite functions and the total functions assigned should equal the total functions required for the operations. In this connection I would like to refer to a chart which Colonel Hornor recently showed you in his talk. He stated that it had been presented in a previous year by a "couple of radicals." It called for a secretary for supply and logistics on the same plane with the Secretaries for the Navy, Air Force, and Army. It also showed a command headed by a commander of Logistics forces. In other words there was set up a fourth force on a par with the other three. I assume that that organization was not for the ZI only but that a theater commander would have such a fourth force also. I may say that I am 100 percent against the proposal, unless all the other three Departments change their present concepts of responsibility and organization for that responsibility in a very radical way. I believe that I would be against it then even.

The next item is the importance of transportation and its control in the theaters where transportation, equipment, and supplies are almost bound to be insufficient. It is necessary that all means of transportation should be under a single direction as to its use to accomplish the theater objective. The operation of air, ground, or water transportation, or parts of them, may be assigned to one or more forces or commands in the theater; but what it shall do, in other words what it will deliver, and where, and to whom, must be governed by the theater commander's definite direction.

I would like also to emphasize that administrative plans must be flexible. All major commanders in a theater and the necessary members of their staffs should know the major administrative problems involved in the operations in both the planning and operating stages. The higher the headquarters and the larger the command

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the more important is the time element in administrative plans and the greater the need for flexibility. Weeks and months may be required to effect major changes in requirements for personnel, equipment, and supplies. I know that in the past, in the Army at least, far too little thought was given to the required command staff, and large organization training to meet the administrative problems of a War Theater. It is my opinion that too little thought to this will be given in the future and very little done about it.

I am sure that as a result of this presentation you won't know the answers to the many problems of distribution in the theaters, but I hope I have given you some food for thought for the future.

COLONEL HORNOR: General Moses, you mentioned that the War Department organization in 1942 was unsound. Would you care to comment further on that statement?

GENERAL MOSES: Yes. It was unsound in that it did not follow the principles of command. A command for a particular function or mission, such as the ASF or the SOS, in my opinion, is necessary. But the placing of War Department functions in that command was wrong, and that was reflected in the theaters, where corresponding theater functions were performed by the SOS of the theaters. The War Department has corrected that to some extent, but they have left out the SOS Command.

In my opinion, the G-4 or SS&P should not be both a staff officer and an operating agent. The Department of the Army should have-- and I believe it would like to have--a command which has definite service functions for the Army as a whole. I heard sometime back that that had been proposed; but it involved too many headquarters; it involved too much distribution of effort, we might say. Principally for economy purposes and also because it might have been criticized by Congress or, in fact, disapproved by Congress and others, it was not done.

Certainly for training purposes in time of peace and in preparation for war, we should have such a command today. Our staff should function as staff officers, and our SS&P should be a coordinator of all efforts of all the commands, including the theaters, and not be an operating command in addition.

QUESTION: In respect to the matter of overseas unity of command, General, how far back should that unity extent? If it stops at, you might say, the edge of the theater, then I believe you would have a very unsavory mess when it comes to getting equipment particularly and perhaps personnel as well to the theater. Would you comment on

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the possibility of extending it to the Zone of Interior, at least to the port?

GENERAL MOSES: You have hit a v-ry fine point there, unquestionably, by emphasizing transportation as the chief difficulty. But there again, there is some point in the theaters where personnel, equipment, supplies, and everything else must arrive. That point marks the end of the mission of the Zone of Interior, in my opinion; and what is done there, how it is done, what is received, and anything of that sort should be under the theater command.

The technical channels, at least in the Army, must not be cut. We cannot say, "Here's a body and there's a body; we have no connection." That is obvious. But the powers of decision and command, no matter what they amount to, must end somewhere between the Theater command, as a subordinate, and the Zone of Interior. Your technical channels run back and forth, your transportation runs back and forth and there is an enormous amount of coordination, particularly in transportation, that has to be done. But the authority at the theater end must not be interfered with.

I do not think there would be any particular difficulty if all of us, including commanders and technical operating people, understood what is was all about. I think our chief trouble is our lack of knowledge and lack of experience. We will go into every war with the same lack of experience and knowledge, in my opinion. We won't have time to find out the answers. So we will still be confused even though we set up the organization beautifully. You will have the problems all over again. If our thinking is sound, we will solve those problems. But there will always be problems--you cannot get away from that--and not because of poor organization or improper planning, but because of lack of understanding of the other fellow's job and perhaps because of false loyalty and self-interest. We all have a certain amount of self-interest. All those things enter into the problem and will unquestionably create difficulties. Is that generally what you had in mind?

QUESTIONER: I was trying to be specific. I wanted to get control of the supply port in the hands of the theater commander so that he would really have it under his wing.

GENERAL MOSES: The minute supplies arrive there, it is a theater problem and nobody else's. It should not be otherwise.

QUESTION: General, I believe there was considerable criticism about the organization in Europe--the SOS, the ComZ, or whatever else it was called. A good many people thought it failed there. Yet the organization in the Mediterranean, as I understand it, was very

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similar yet very successful. In other words, the SOS in the Mediter-  
anean was practically the G-4 for the theater. Would you care to  
comment on that difference, sir?

GENERAL MOSES: I may not know the facts in this case. In Africa,  
however, they did not have the right setup to begin with, I mean after  
the first very short period. They had trouble until they got going,  
perhaps up into Sicily and then over into Italy. But my understanding  
of it is that there was a G-4. He may have been in the Allied Head-  
quarters and he may not have been a G-4 for the theater, as such, in  
those operations, but I believe there was a G-4.

Don't misunderstand me. The SOS, the supporting force in the  
Communications Zone--whatever the name may be, as you say--can have  
a very definite mission; and there will be no trouble as long as  
there are no shortages and as long as there is nothing but one thing  
to do. You get into trouble--which is the usual case--when you don't  
have everything. And you almost always won't have everything.

Then somebody must direct it. Not the commander of the SOS or  
its supporting unit. He has a mission of support. Somebody must tell him  
who to support, which is the most important force, and whether he should  
help himself. Lord knows, he has a big job, one of the biggest I know  
of. He must have equipment and supplies; he must have everything with  
which to do his job. He should yell and yell loud for the things he  
needs to accomplish his mission. And he is in competition, in spite  
of differences of opinion, with every other commander for everything  
except possibly artillery and bullets. Perhaps he does not have anti-  
aircraft and infantry weapons. But he is in competition and somebody  
other than himself has to decide where and to whom things should go--  
and for his own good; for then he cannot say, "I'll be a big-hearted  
Joe. You take it. I just won't worry; I won't deny mission. You  
take it."

I think you had a G-4, and you also had a good SOS; and the thing  
worked.

Can anyone tell us whether there was a G-4?

SEVERAL STUDENTS: There was a G-4.

GENERAL MOSES: Possibly he did not operate up close to the front.

LAST QUESTIONER: Very broad policies and a good many of the  
functions of the theater as a whole were passed on to the SOS.

GENERAL MOSES: I hope not too many theater functions were passed on.

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But you certainly can give him responsibility. As long as you know what he is doing and there are no problems of decision that the theater commander or the G-4 for the theater should make, then there is no worry about it at all. But normally, in tough going, where the Army, Air Force, and Navy and different kinds of commands in those units or even a command made up of several of those units are involved, you are going to have trouble unless you have somebody coordinating. I think somebody was. From what I know, it was done very well. The support was done very well, too. I am not arguing about that at all. I don't know too much about it, so I am afraid to go into detail.

QUESTION: Sir, the last speaker said the ComZ failed in France. Would you want to comment on that?

GENERAL MOSES: I should have picked that up. I wouldn't say that. All commands have their troubles. There may have been mistakes, but the Communications Zone was put in a very difficult spot by the actions I have just described. It was not their fault that the enemy ran away. It was not their fault that there was hard going in the beginning and they couldn't get their things across early, when they needed them. They may have had their own individual faults but they were put in a spot by the operations themselves. The ComZ, I am sure, not only accepted the proposition but went wholeheartedly along and probably recommended it. Certainly, there was no question of their failing in that respect. I do not go along on that. We had our troubles in organization over there, but I would not say ComZ failed.

I would like to say this: Some Air Force people on the Theater Board which was working on the logistical situation after the war and of which my friend, General Gay here, was a very prominent member, said it was essential that the Air Force have its own lines of communication in a theater. That, to my mind, is wrong. If there is room for two lines, let us have them. If we have equipment, personnel, and everything necessary to man them, let us have two lines--not necessarily for the Air Force alone, not necessarily for the Army alone. There must be lines of communication for the supporting command, whatever it may be. The argument is that the Air Forces did not get what they needed and that, if they had their own lines of communications, they would have gotten what they needed. Well, there was not enough for everybody over there, and it must be the theater commander's prerogative to decide whether the Air Forces, the SOS, the Army, or the Navy (if the Navy is in the picture) is to get what there is to be gotten; he must decide what is the most important element today and what will be the most important element tomorrow.

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All of you can ask for this, that and the other. You can cry about it and yell about it. And undoubtedly there will be things done incorrectly. But that does not justify going outside of proper organization, proper command, and proper direction and control. You won't have that direction and control unless the commander and his staff and all the major commanders and their staffs know the problems, know the other man's worries, and are willing to sacrifice for the good of the whole (which is hard to do when it should be done) and not try to grab unnecessarily. We are going to grab in the next war. I am just telling you we shouldn't.

QUESTION: I would like to ask the General if he would comment on how much of the confusion of G-4 responsibilities with ComZ responsibilities may have been due to the integrated nature of SHAEF and the lack of an actual American theater commander and staff.

GENERAL HOSSES: Actually, I think there would have been confusion even with a separate USA headquarters, because of our setup at home; because the SOS went over to the British Isles when there was little else in the theater; because of the situation as it grew; because of lack of experience and commanders, of their staffs, of theater commanders and their staffs, and because of administrative problems. The thing I am trying to stress is that the situation became unhealthy as it grew, for various reasons, and that unhealthy condition was sort of perpetuated. I don't know whether that would have been so if we had gone over there originally with a full command, air, supporting troops, and combat forces. But the fact that SOS went over early had a great deal to do with it, in my opinion. And certainly, if I were to criticize our effort as far as staff and command relations were concerned, I would say that the proper decisions were not made at the right times as to how the organizations would be run and that the theater organization was not ready to do its job as a United States force rather than as an allied force.

QUESTION: General, apropos of organization in a theater, which you have touched upon, there has grown up a practice of alternately by-passing command levels for supply purposes. That practice has, of late, been set forth as a principle of organization, that you should alternately by-pass levels of command. Because it has been so expressed, I wonder if you would comment on the validity of that idea.

GENERAL HOSSES: I haven't given much thought to that, but I would say it is not necessarily true as a principle. We have that, of course, in the Army organization; it might be in the others. Many people argue against that setup, but there may be good reasons for it; and certainly, it can be done. When it is done, responsibility is

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is taken away from the man who is by-passed; and it should be understood that he no longer has that responsibility. No commander likes to be given a job and be responsible for something unless he has the means to accomplish it, is given the means, or knows that he is supported with the means. But if the commanders concerned know that they no longer have the responsibility, then I see no objection to by-passing if it results in economy of effort. But, in my opinion, there is no principle to justify by-passing alternate commands.

COLONEL HORNOR: General Moses, I thank you in behalf of the College for a very interesting lecture and one, I am sure, that has furnished us all with plenty of food for thought.

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