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DOLLAR DATA AS A TOOL OF SUPPLY MANAGEMENT

2 April 1953

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Mr. Richard K. Chapman, Chief, Office of Supply of the Vice Chairman for Supply Management, Munitions Board, was born in Wells, England, 23 June 1899. He came to the United States in 1904. He served in the Artillery during World War I, was commissioned in the Reserve Corps in 1927, and served in the National Guard and Organized Reserves until 1940. He attended Iowa State Teachers College and Iowa State College and was graduated with a Bachelor's degree in 1933. He served as an instructor in Economics, Iowa State Teacher's College; purchasing agent, foundry engineer, and mechanical engineer in industry. He entered Federal service in 1935, serving in the War Department as auditor; civilian chief of Audit Division, Office of Chief of Finance; principal civilian, Audit Division, Office of Fiscal Director, ASF; supply specialist, Control Division, ASF; chief, Management Engineering Branch, Control Office, G-4, Army. Mr. Chapman was responsible for financial management programs in G-4, review and analysis of systems for supply, requirements, procurement and production, and the fiscal aspects of logistics functions. He was appointed to his current assignment in 1952.

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## DOLLAR DATA AS A TOOL OF SUPPLY MANAGEMENT

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**COLONEL MARTZ:** Gentlemen, the number and variety of items in the military supply system are so vast that it is difficult for us to comprehend the magnitude and the complexity of the problems involved in handling them. The problems become even greater when items resulting from modern technology with their supporting spares are added to the system.

To give us a new approach to the supply-management problem, our speaker today has elected to use in his discussion dollar values and tonnages as two possible media of supply control. I am sure he will provide us with some food for thought, as well as some different concepts in supply matters.

Our speaker has been intimately associated with the fiscal aspects of supply management since 1935 through his various assignments in the War Department and on the Army General Staff. Even prior to then he was associated with military supply through his service in World War I and subsequent assignments with the Officer Reserve Corps. He is now serving on the Munitions Board as Chief, Office of Supply, under the Vice Chairman for Supply Management.

I take great pleasure in introducing Mr. Richard K. Chapman, who will speak to us today on "Dollar Data as a Tool of Supply Management."

**MR. CHAPMAN:** Thank you, Colonel. General, ladies, and gentlemen: I think that all of us can remember far enough back when supply was a rather small operation. Going far back to the early days of this Government, there were very few items in the supply system in its entirety. Prior to that soldiers furnished their own individual equipment. They maintained it, and generally they maintained themselves, without any serious supply problems.

What we do today is to groan at the number of items, the complexity of items, and the quantity of each. The number has grown so as to stagger the imagination. Our cataloging agency shows that there are about 3.5 million items in the current supply system of the Defense Department. That is an astonishing figure. Some of them are minor and some of them are major items. No one knows the volume, at this time, of the total stock. Probably the best figures indicate that it is about equal to the total volume of the stores held in stock in the civilian economy of the country, both industrial and commercial, somewhere between the figure of 50 and 65 billion dollars. That's a great deal of money and it is a lot of supply.

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Now, we manage and fund supply, generally, on the basis of item information. We review the supply history of items. The most important items, the ones critical to the military forces, are reviewed in great detail. Supply people habitually have their ears very close to these items and they understand most of their characteristics. It is not often we are in an oversupply position on one of those items, unless there is a very good and sound reason for it. Customarily, also because of the pressure and the energy required to keep current on those items critical to the military forces, supply people don't pay anywhere near as much attention to the items which are in long supply as they do to items on hand for which the requirement is diminishing and the experience falling off.

The whole fact of it is that if we have 3.5 million items or any major portion of them in the supply system, it is very difficult to find enough talent to review the supply history of every one of those items once a year or once every two or three years. We can't get enough talent to do it. To make a supply and demand study of an item is quite an undertaking. It takes a great deal of judgment; it takes maturity; it takes a pretty good knowledge of what to supply in the way of consumption needs in the programs of the services. Obviously, the number of people capable of making an intelligent analysis on that basis is limited, but I think we can assume that we do a reasonably good job on supplying the armed services with the things they need.

That brings us to the point of supply management. In its simplest terms, I think we can say that supply management is the direction which is given to insuring that the fighting forces have all the supplies they need, when they need them, and where they need them; that is an old cliché. But there is another aspect to it and it is the corollary. This is what we are going to talk about today. It is to make sure we don't have in our supply pipeline a large volume of supplies which we don't actually need--for which there is no foreseen requirement.

I think that we can assume that we cannot analyze every item in the supply pipeline in the detail that would be required to make sure that we have only the quantities we need, nor can we anticipate what the future supply trends of every item in the supply system may be. I think we can discard that as being impractical from the standpoint of cost and the number and competence of people required to do it in that volume.

Having in mind that some different treatment of this subject was needed, the Defense Department asked the Congress for legislation some years back--in 1949. As a result of that, we have Public Law 216, title IV, sections 405 and 410. We have the authority to use revolving stock funds, industrial funds, and financial property accounting.

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I would like to speak first on the financial property side and on the stock funds second. The theory behind this law was that if we could find a common denominator by which we could evaluate in broad terms what the effect of our supply operations was, we might be able to analyze the various characteristics in the behavior pattern of supply activities. We would then be able to evaluate, far better, the total effect of the operations as measured under item information.

To explain that, I would like to say this: Some people have the ability to remember a great deal of detailed information at one time. Maybe some people could recall the supply history of several thousand items at any one time and they would know what the total situation was. Certainly, that depends entirely on the individual, and there is a limit to that. Obviously, a G-4 of an army, an A-4 of an air force, and the counterpart number in a navy could not be expected to have a great, accurate picture of the entire supply system and how it functions, just what is taking place, from the data that he gets on an item basis. He could not possibly recognize the significance, for instance, in every transaction that takes place. There is an element of error, either mechanical or human. Usually they are not great errors, because, generally, supply people are very well-trained and use pretty good judgment. I think the facts prove it--but they do make errors.

If we make errors on almost every transaction one way or another, it will be an error either on the plus or the minus side. If we make an error on the majority or the larger portion of the transactions, considering all the items we have in the supply system, the total extent of that error is astounding. We never will be able to measure it by looking at stock status reports on an item basis.

Realizing this some years back, in the early days of World War II, we tried to find a common denominator to measure in broad terms the effectiveness of the supply system. We went to tons. We could show the tonnage going into and coming out of depots, which is a very good index. It is similar to the carloading index used in industry as a broad measure of the economic activity of the country. The industrial activity for the carload goes up and down, and wages and employment go up and down with it. It is a criterion.

In the same way, we used tonnage, but we found serious limitations in the use of tonnage. For instance, a ton of electronics equipment and a ton of heavy equipment indicate that this medium is used for only certain things. Volume or activity can be measured, but even then it has limitations. One crane weighs many tons and obviously that must be taken into consideration. We must know the type of supply we are talking about if we are going to take definite action.

So the framers of Public Law 216 came up with a dollar medium. The Navy has had considerable experience over a long period of time in the

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use of dollar figures and it has been very satisfactory. So we have a requirement in section 410 of the cited law that the military services will account for property in terms of dollars as well as by item to the extent practical, and the law requires that the Secretary of Defense will prescribe the system which will be used. There has not been a great deal of effort, up to now, placed on financial accounting, as such.

I would like to go back just a moment to try to see what financial property accounting would mean. I think we all realize there are a great many items in the supply system that should not be in it. We don't seem to have difficulty getting any one item into the supply system, but we have a great deal of difficulty in getting one out. One of the troubles is, when we put a new item on a table of allowances or table of organization and equipment (T/O&E) and authorize it for use, we don't always make a decision then and there as to what the effect of the new item will be on the items already in the system, and we don't make a decision to hold up the introduction of the new item until the stock of the present items or other items affected is depleted. As a result, we find that we have difficulty using the old item. We are in heavy production on the new one, but still haven't got rid of the old one.

The Army has such things as McClellan saddles. The Navy has anchor chains. The Air Force hasn't had an opportunity to accumulate so much, but they are doing quite well. During the early days of the war, the Air Force came up with the idea that it wanted to log the flight of planes by minutes, so it bought a lot of computers or posting machines, several thousand of them, that computed in minutes rather than in dollars and cents. Shortly afterward, the Air Force discontinued this practice and sent the machines back to the depot. It still has the machines which are of no earthly use. They could have been modified by installation of new key parts, but instead the Air Force is buying new posting machines and haven't disposed of the old ones. One of the reasons is, the people responsible don't know the cumulative effect of the error.

To come down to the use of the dollar data--if we price out the supply documents, issue slips, requisitions, and so on, we get the total dollar value, provided we can sort that information out in this manner. A study was made in one service recently on a certain class of supply; in that study they wished to show the total dollar value of all the items in that class of supply, phased out as to quantities they had on account, in relation to issue experience. They had total on hand and total issue figures, phased out by years, quantity in procurement, and total scheduled for maintenance. The identity of items was not indicated. The report showed that a large quantity had no issue experience--in other words, stock to infinity. It would last forever; no one would use it. It showed 5 million dollars in procurement and 7 million dollars in scheduled maintenance. I don't know how that happens, but it does. It is a pretty bad situation. How prevalent is it? I defy you to find out from item information unless you price it out, make an analysis, and establish

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supply-behavior characteristics. We can't fail to take cognizance of a report of that kind which will show the effect of all the errors in judgment made on all the items of a class of supply, focused into a single figure. We can't fail to realize that officials will take action as a result of that type of paper.

If we had similar information across the board, we would find that we would have to take some action on undesirable situations brought to light. We would have to clean items out of the pipeline. There are two theories, depending on where we sit and what our profession is, as to how financial information should be used in this respect. There are those who feel that we should assemble it in broad terms, across the board, in the kind of report I was talking about, and that it should be used by commanders and people in the higher echelons to tell the men below that they had better clean up the situation.

On the other hand if the man who makes the errors--and all these errors are made away down the line at the point of requisition--does not add them all up and analyze them to advise himself at the time as to the effect of his minor errors, we can't expect him to correct them. It isn't necessary to have some topside order telling him. The man has to know which items are causing trouble. So, the advocates of this theory say that the only value from a supply-management standpoint of financial information derives from its use by the people who perform the supply operations at the point where the work is performed. This necessitates having the necessary information in terms which will be understandable to them, so they can regulate their activities. When they see something getting out of hand, they can take the necessary action.

If we can isolate a class of supply at the point where a stock clerk or warehouseman can watch the trends and tell what items are getting out of hand, he can go forward and say, "Do something about it," and he can clear it out. If we don't do that, the information in the hands of higher echelons might be a dangerous instrument. We then come to the theory of whether to use the management information as a club to beat other people over the head to make them do the job better, or to give the man at the working level the necessary information so that he may do it himself.

There are a surprising number of people who believe we don't need to give this information to the man who does the work, and that we should give it to the superior so that he can police the man below. I don't think it admits of any argument. I think it is essential that every workman has the necessary information so that when something does go wrong or a trend is developing, he can isolate it so that he can look at the item records. Don't forget we have to come back to those item records. None of these devices will supplant them or take away the necessity for them. We simply must know by item how much we have, where it is, what its condition is.

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I am reminded of a story of a man who was coming home late one night and he noticed another man down in the gutter, under a street lamp, hunting through the litter. He thought, that man must have lost something valuable to be poking in that gutter at this time of night. I will try to help him. So he walked up and said, "Did you lose something important?" The man said, "I dropped my wallet." They both hunted through the litter and they came up with nothing. So the first man said, "Are you sure you dropped your wallet here?" and received the following reply. "No, I dropped it over across the street." "Well," the first man said, "Why are you looking for it here?" The answer was, "Because it's the only place I can see. There's no light over there."

That's the point of this portion of the discussion. If the light is not put where the errors occur, the result is not going to be beneficial. The information must be put into the hands of the man who is doing the work. It doesn't do any good to put it somewhere else. We might discover the extent of the error, but not where it is, which is the important thing.

I have been talking about the use of item information and financial property accounts. We have a couple of devices we employ that do add to the benefits. I hope I have convinced you there is some value in being able to analyze, without regard to the item, the composite picture on any type of supply, either at the working level, or at the higher level.

Now, about the stock fund under Public Law 216--the Navy has had one prior to that law for 10 these many years. The stock fund simply is a device which takes financial property accounting and adds to it a funding plan. It is a revolving fund. When we establish a stock fund we put a price on all our supply on hand and capitalize it. In other words supply on hand becomes an asset to the stock fund. We are then given a sum of money calculated to pay for all our procurement until such time as we can get the money back from customers. In other words there is a buyer-seller relation. We buy stock for the stock fund and sell it to the customer. Appropriations reimburse the fund.

The theory behind the stock fund simply is that we will not budget for a balanced stock; we will not budget for procurement; we will budget for the use of the items of supply as issued to users. It will be in a consumer budget so that we can repay the stock fund for every issue withdrawn from it. The stock fund is revolving. We always get our money back. Normally, it has around 90 days' reimbursement time. So there is enough liquid capital available to last for 90 days. The theory is not to buy the entire annual requirement at one time. We can maintain a lower level of supply. Also, because new items cannot be bought until money comes back, we must sell the items in our pipeline.

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That means we cannot keep items that don't move. If there are items that don't move, the stock fund dries up. It freezes the capital. Pretty soon there will be no money to buy what we critically need. The stock fund allows us to keep a lower level of supply because we can go on the market at any time, without regard to fiscal year appropriations, and replenish stock. It is particularly adaptable to off-the-shelf commercial items. We may run into trouble on items if they have a large number of military characteristics and where obsolescence is a serious factor. Obsolescence will dry it up. We can't sell obsolete items; therefore we can't get our money back and are without capital to buy anything.

The stock fund does have a lot of value. Some people who have been using it don't think it has. I submit they have not used it properly. I would like to go into that for a moment. The Defense Supply Service, a very small operation, has a total capital of 2.5 million dollars. It handles supplies of office equipment, pencils, and so on, that are used in the Pentagon. It started out capitalizing the stock on hand. It had 700 thousand dollars of cash given to it by the Defense Department. For the year or year and a half that it has been in operation, it has liquidated a lot of old stock.

In the stock fund, the manager found that he couldn't continue to maintain all the items he had previously. All the material wasn't moving. So he told the people that he had to liquidate this slow-moving stock and issued what he had. Because they couldn't get what they wanted elsewhere, they had to take it. As the result of a year's operation, he has returned to the Treasury 700,000 dollars cash, and before the end of this fiscal year he will have returned 300,000 dollars more, making a total of about a million dollars, which is a pretty substantial return in a 2.5-million-dollar operation.

I wonder how much the military services could do if they operated about the way this Supply Service is operated. Obviously, this operation is simple since it has no military items in it. The items it handles can be bought from any dealer downtown in any quantity. But this man has demonstrated that a lot of old stock can be liquidated if so desired.

The Navy has added to its stock fund this year the supply of a number of items for the support of MST's. It has assimilated medical and dental supplies in its stock funds. There have been five other minor categories of supply added this year, but they have not had to get a single cent of additional capital. In other words they have been able to liquidate supplies they previously had on hand in the stock fund to get enough money to finance the procurement of seven new categories of supply in the stock fund.

The Quartermaster of the Army uses stock funds for clothing and equipage. I think this particular stock fund is probably the least

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effective of any, and one of the reasons is--in defense of the Quartermaster--it got off to a bad start under extremely unfavorable conditions, to say the least. It is a very large operation, somewhere around 1.5 billion or 2 billion dollars. However, the annual report shows that the volume of activity in the stock fund does not indicate that the capital ought to be anything like 1.5 billion dollars. It looks as though it ought to be very much under a billion, which means there is a lot of dead stock in the fund. It does not have, in that stock fund, enough information of the type I have been talking about to weed out all the items of stock that are not moving and which should be liquidated.

The Navy has, of course, much more experience and it has gone a lot further, although I think there is much more to be desired in its stock-fund operation, too, in the way of liquidating unnecessary supplies.

In present programs of the stock fund, the Air Force is including medical and dental supplies. I believe it is also considering petroleum and its products (POL).

The Quartermaster of the Army is arranging for substantially larger stock fund program this year. They are considering putting all other Quartermaster General supplies in the stock fund. The Army plans now to have a stock fund for POL, and it looks as though in the next year and one-half the Quartermaster will have all supplies under the stock fund.

In the other technical services, they are getting into a number of items which have high obsolescence factors and many military characteristics. The stock-fund principle is not as well adapted to their operation as it is to the Quartermaster.

There are stock funds planned in Ordnance for spare parts. These are strictly in the planning stage. There has been one discussed for photo supplies and for various other categories. So the stock-fund principle and program is expanding. I think it still remains to be justified from the standpoint of utilizing the capabilities of the system to develop the kind of information which will permit the action necessary to weed out the supplies that are not needed.

I think that is a most critical point and, as I said before, it might be the dangerous side of the picture. You must face the facts. The facts are simply these: If the stock-fund reports or if the financial property-accounting reports show the total volume of supply is far in excess of the issue experience (the total value of issues), and I am talking about recurring issues rather than the one-time issues, if they show a vast difference between them, and my guess is that the Defense Department would probably show an across-the-board average of about a ten-year supply or more, that is a pretty serious situation.

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The availability of such information in the hands of the Defense Department, the Bureau of the Budget, and Congress is simply going to mean that there is going to be resistance from these agencies when additional warehouse space is requested. They're going to say that obviously we don't need that much space; that we need to clean out our stock. They're going to say that we don't need transportation, that we don't need to haul that stock around the country; that we should get rid of it. They don't know that situation as well as we do. Pressure will be on if we need facilities of any kind. Requests for additional space will be subject to criticism. The authorizing agencies are going to get that relationship down--the total volume to our issues. It means we will have to clarify, specifically, definitely, the volume we can have in our warehouse, the types of reserve. There will have to be a limit on it. We cannot say, "This one is closed. We have so much in reserve." Reserve is active stock. In any program it will have to be defined.

I think we are all cognizant of the fact that we have an awful lot of stock on hand. The Army has McClellan saddles, as I said before. Sometime back the Army realized it should not keep the saddles and sent them to the leather working shop at one of its bases and had saddle bags made out of them. But the Army didn't have requirements for saddle bags, either, so it finally sent them to the Greeks under foreign aid.

I think when we consider the total volume of supplies to the extent of 50, 60, or 65 billion dollars, it is something to think about. You know what our consumption is, as related to that. It doesn't begin to look like that but our budget does.

I think we should take away with us the thought that we will be much more effective in meeting troop requirements if we do not have all these extraneous items which absorb our strength remaining in the pipeline. That is the thought I want to leave with you. It takes materials handling equipment, labor, statistical work, clerical work, and supervisory work; it fills up warehouses. The situation is one for war planning at present for the reason that we have not enough warehouse space for new procurement but have excess stock on hand. All this points up to the fact that something drastic needs to be done about disposing of excess and surplus property. I am not going to discuss that. It will be discussed with you in a later meeting. Strides have been made in that direction to speed up that action.

Another aspect of the stock fund and financial property accounting that I want to leave with you is the policing of the user. Supply systems generally have attempted to some degree to police the user. In the Army and Air Force, particularly, we edit and re-edit requisitions time after time. Every echelon performs an edit. The troop commander submits an issue slip. The first column shows the quantity on hand. That's the T/O&E allowance. (The Air Force has about the same thing.) The next

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column shows the quantity on hand. The next column is the difference between the two, the quantity requisitioned. The supply officer is required by regulation to place a certificate thereon which shows that the items ordered are within his allowance and when received will not constitute an excess of the authorized allowance. You would think that would be good enough, and that it could be issued, but oh, no; it goes to the supply office and it gets out the T/O&E and recomputes it to be sure the tactical supply officer didn't make a mistake. They check the computation to make sure the quantity ordered is correct.

It overlooks one fact. There's one figure it can't check. That is the quantity on hand. If the certificate was falsified, he certainly wouldn't put the right amount on hand. All that checking, all that effort is wasted. But it is done several times through the supply cycle. It slows things up but it is an attempt to police the user, to make him more careful.

Now, supposing we priced out all these issue documents. Suppose we gave to every commander of a using-activity a dollar report to show him each month the total value of all supplies of all kinds issued so that he can watch from month to month what the consuming habits of his organization are, so that he himself can police them. Obviously, he can't do it by item information, but under the present policy we can't do anything in a supply system except by items. He can watch them so that if they crop up in consumption he can call in his commanders and he can tell his subordinates that he wants issues cut back and that he wants them to see to it. He doesn't need to know by item. He can leave that to the supply system. That can be used to police the user.

If we have a stock fund, we are in a far stronger position to police the user for the reason that he must include in his budget the necessary funds to replace the stock-fund issues. In other words, he has to buy it. If he runs out of money, he is not going to buy. He must use a lot more judgment in ordering. The requisitions, before they are submitted, will have to be screened to make sure there are funds to pay for them. As it is now, if it is in the pipeline it can be justified by a good story. Under the stock-fund system, if we don't have the money, we can't get the item; we have to get more money.

COLONEL MARTZ: Gentlemen, Mr. Chapman is now ready for questions.

QUESTION: I can see the advantage of the stock fund and how it would work where there is a relatively stable organization; but, assuming that there is an army today of 600,000 and tomorrow one of 3 million, how do we work the stock fund to both increase it and, when the army is demobilized, get rid of the goods? Please comment on that?

MR. CHAPMAN: Since we have the information on the material, and the strength, which of course will be reflected by an issue demand, we start the procurement program in the same way. We might ask for additional

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capital to do it. Our performance in getting additional capital up to now has not been serious. At the moment we have a very large quantity, 700 or 800 million dollars of available capital, that we could allocate to any stock fund in the Defense Department. If we got into full-scale war, we would have to have a great deal more. I don't think we would have trouble getting it. I think if we got into a jam we would have to go ahead and obligate anyway, until Congress appropriated the money for increasing the working capital for the stock fund. It would have to come from appropriations to support the services. If you didn't get money fast enough you would be in a serious position. The Navy had some such difficulty, during the war, and this put it out of joint here and there.

I think the answer to that problem depends on what there is in the supply pipeline under the stock fund. If we have military characteristic items, we will be in real trouble because we have long lead time. The longer the lead time, the more capital will be needed in our stock fund. If we confine it to commercial items that don't need processing, the lead time is short. We can buy the item on the market any time it becomes essential to have it. If we get into items with long lead time, more capital will be needed in our stock fund.

Obviously, the stock fund works far better in peacetime than in wartime. In wartime it gets so large that much of the significance of the stock fund is lost. It grows so fast we can't keep on top of it. At the same time we are faced with the situation where we lose many of our best people. Many Reserve officers go back on active duty; others who are not Reserve officers get more attractive offers in industry; and we are faced with a serious personnel problem and a retraining program in addition to stepping up the activity. Obviously, in wartime, there are some really difficult problems.

QUESTION: I would like to carry that on for a moment. It appears to me, then, that the stock-fund method will work fine in peace for certain items but is not suitable for war; and that is, of course, the purpose for which the military services have been trained.

MR. CHAPMAN: To this point I think there is merit. In peacetime we by the use of stock fund can operate with a great deal more economy. There is going to be a lot more money to spend for the things we need and we are not going to be buying stuff we don't need. So the military strength should be improved in peacetime, and the effectiveness should be much greater, because we are always pressing the limit of the funds we can have for maintaining our services.

So, if we can get more effective use of the money available, our striking force is going to be much greater than it would be if we hadn't had a stock fund. I am not saying the stock fund per se will give better management, but if it is properly exploited I think we will have a better striking force on M-day than we would have otherwise. We are always

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saying we are going to turn over a new leaf and do better than we did before, but I don't believe it.

QUESTION: My question is closely related to the last one. Would you explain a little more fully how we set up reserves? It is plain that we have to have a stock of uniforms on hand, guns and ammunition, and the equivalent of A-bombs, while at the same time we should get rid of the McClellan saddles. It seems to me the accumulation of either looks equally bad under the concept of revolving funds.

MR. CHAPMAN: Do you mean war reserve, any special reserve?

COMMENT: Yes.

MR. CHAPMAN: Well, we have to put a limit on it. We have to decide how much is going to be in that reserve. That statement shows that so much of this is reserve. In other words that will be a constant figure. You may issue out of the reserve and replace it, but the total volume in the reserve will be constant. If the procurement objective has been such that we reach mobilization reserve, for instance, that will be a constant figure. It is a static thing. We are then concerned, not with the management of the reserve, but with the management of the stock itself rather than the reserve. It is an accounting technique. We say X million dollars is reserve; this much is active; this much is for M-day's procurement, or whatever else we have. Does that answer your question?

COMMENT: Yes, sir.

QUESTION: Mr. Chapman, I wonder what is the real magnitude of the problem you are stating, in terms of, say, warehousing space. If we could get the dead stuff to move, could we get new stuff under present warehouse roofs?

MR. CHAPMAN: To be rational about it, there are lots of items in the supply line that are not moving, but which have military potentialities and which the services are not quite willing to let go. I don't think they anticipate that they are going to send any more pack saddles to Greece, but they still have military potential, and the services tend to hang on to those until the services are sure the saddles have no further value.

Our opinion is that they reach a point where we have to liquidate them, get rid of them. We are never going to reach the optimum whereby we will always have on the shelf goods in the quantity people are going to demand and when we issue our last pair of shoes there is going to be another one to put in the place of it.

I believe we would have enough warehouse space if we could get rid of the stuff which has no military potential at all. There's quite a lot of it.

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QUESTION: Some of my question has already been asked but I don't think it has been fully answered. I am worried about the McClellan saddles right now. I am worried in the same way about, let's say, the antiaircraft guns that we may have in stock after the pilotless fighters and pilotless bombers and whatever else take over the defense. First, how do we dispose of them? Second, if we keep them in stock, what capital value is placed on them? Third, how do we catalog something purchased 10 years ago in present-day values? Do we use the purchase price, the replacement price, the deteriorated price, or the fact that they have no value whatsoever? How do we take care of obsolescence? How do we take care of the fact that military is only insurance and we are buying term insurance from day to day with the best weapons available at the time? Or are we not fettering ourselves with financial bonds that will tie us up at the beginning of the mobilization?

MR. CHAPMAN: That's quite a question. As to the term insurance, all we want to make sure of is that we are not paying too heavy a premium for it. As to the pricing, we use in the stock fund a standard price. It is a weighted price which is generally calculated to give us a return of an amount of money which will permit us to replace the item. We do not depreciate the value of an item simply because we are not using it any more. It still is carried on the books. It does have the value it had the last time we had a price adjustment on it, the last time there was a significant action on the item. It is an accounting device so the volume can be measured. If we used different prices on it we couldn't analyze the information at all. We can use only a given price level and analyze within that. Everything is introduced and picked up on the books at a given standard price. It is maintained at that price until such time as it comes off the books, whether it is by excess, surplus, or obsolescence.

In other words if we knew the total dollar value of the antiaircraft guns in the stock fund, and the unit price was 75 thousand dollars, we could divide the total value of antiaircraft guns by 75 thousand and know how many we had. If they were carried at various prices that couldn't be done. That is the reason standard prices are used. It is not a question of what they are worth; the present market value is not considered.

QUESTION: In that case are we not jeopardizing any justifications we take before Congress for new funds by placing this false value upon obsolete and worn-out equipment that is in stock?

MR. CHAPMAN: I really don't think so. The people who present the budget to Congress know that stuff doesn't have that market value. We are not defending it. The only way that it enters into the matter is when we come up for a new program, Congress is going to ask what we are going to do with it. The decision has to be made. We have to

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face it. Are we going to keep the stuff we have, or get rid of it? If we get rid of it, we are not going to get much for it. I think on items like that we can get only the scrap price, but I think we are going to have to face that problem shortly anyway. Right now, in budgets for construction of warehouses, we are having to face that problem. We are not getting them approved.

QUESTION: I think it is safe to say the inventories are a problem no matter where they are, in both commercial stores and the Army and the Air Force. I wonder what we are talking about as to the magnitude of the problem, and what the errors are. We are talking about 60 billion dollars worth of inventory. What is the error? How does it compare with industry, and how bad are we off? I appreciate on a small inventory 1 percent error would be bad, but if we have a lot of equipment that would be proportionate, and it is not bad.

MR. CHAPMAN: I don't think our value should be compared with industry's loss, because industry has ways of covering up losses that we don't have. Our problem is to manage our own operations and reduce the volume of error into sizable proportions. We always have error. I am not complaining about error. I am complaining about the fact that it absorbs our funds and prevents us from doing other things that we desperately need to do, simply because we don't take the necessary actions.

As far as industry is concerned, it has errors, too; many industries go bankrupt; they have financial reorganization and freeze out their stockholders. All our losses in the military services appear on the books and we never get them off. Industry sheds them like a snake sheds its coat. We can't do that. Unless we get money appropriated to buy something, we are hooked with it. We have to write it off.

QUESTION: I would be the last one to say I don't think stock funds are good for us. I don't see how obsolescence can be taken care of. Can you just slough stock funds off? Let's take a specific case. The Signal Corps has some 5 or 6 million dollars worth of World War II quartz crystals that are no good to anybody. They have only junk value; yet if they were capitalized in the stock fund, increased capital would have to be requested. The story would come out and everybody would holler about it.

MR. CHAPMAN: You are partly right. I will give you a tip. The Air Force is buying quartz crystals right now--2.5 million dollars' worth of them. Anyway, if there is obsolescence in a stock fund which was not bought out of the stock-fund money, there is no problem. It is merely written off because it was erroneously capitalized--it should not have been capitalized in the first place. However, if in the course of the stock fund, those crystals had been bought from the stock fund, there would be a loss by obsolescence.

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Now, the point simply is that before we buy so many quartz crystals, we have to keep our fingers much closer to what our probable issue demand on quartz crystals will be, and we have to cut our procurement back before we get to the point where we are coming up with a large obsolescence. We are not going to cure it; we will always have some; but we have information to tip us off regarding the declining issues that we couldn't get in the item system, because we can't look at enough item statistics. There are not enough people to do it. We can combine quartz crystals with other items which have similar characteristics and which will tip us off to what the trend on that supply is, so that we can cut back your procurement a little faster. That is one of the functions of the stock fund.

When you get into items with military characteristics which have peculiarities and which render them readily obsolete, they are dangerous from a financial standpoint. They have a tendency to dry up a stock fund.

QUESTION: My question follows that up. Do we have any estimate of how much of the 60 billion dollars represents obsolete equipment?

MR. CHAPMAN: The answer to that is simply no. That is what I have been complaining about. We have a great deal of statistics within the Army, within all the services, by item, but we still don't know the answer to your question. If I knew the answer to that question I would be happy. We could do something about it. Nobody knows. That's the point of the whole thing. We have to have a system where we will know the extent of it so we can do something about it.

QUESTION: I got the impression from your earlier remarks that there is a reasonable line of demarcation between types of items which are susceptible to being handled in a stock fund and those items which might become obsolete. I believe you mentioned that Army Ordnance was considering setting up a stock fund for spare parts.

MR. CHAPMAN: It is under consideration.

QUESTION: This is a type of item where we would run into a high degree of obsolescence. Do you care to comment on that?

MR. CHAPMAN: Yes, we will run into obsolescence on it, but if we don't have a stock fund, the obsolescence will be a lot worse. I hear some grumbling. My point is simply this: We will shuck out obsolescence a lot faster. It will be a loss to the fund; there is no question about it. It is something we have to face. One of the advantages I can see in a stock fund for spare parts--confined to vehicular spare parts--is that we have to evaluate more carefully the quantity we buy. We have to use more care in the stock decision. We have to face the fact that we are going to have to go with our hand out and ask for

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more money one of these days. But in the present situation under the stock-fund system, we would not be in the position where the Air Force would be still stocking millions of parts for P-40's--which it does. And Army is even worse off. As I said, the Army has had more time at it.

QUESTION: Is that going to change the concept of many programs to procure lifetime spares at the time the program is made?

MR. CHAPMAN: I think they have to examine the program.

QUESTION: Would you suggest that we procure spares and pick them up in a stock fund? In most of our technical equipment we buy lifetime spares. It is general practice. The Navy, in buying electronics equipment, tries to buy enough parts at a time for thousands of pieces of equipment. It expects them to be lifetime spares for the equipment. I don't believe the Navy picks those items up on stock funds.

MR. CHAPMAN: I wonder why it doesn't.

COMMENT: Because of the obsolescence, possibly.

MR. CHAPMAN: I don't think it is a question of obsolescence. It may be that the Navy might not like to have its judgment reviewed.

COMMENT: It would require an amount of thinking.

MR. CHAPMAN: I would like to give you an example. One of the services bought some great big buck gears for a Bucyrus crane. It happened to be that Bucyrus doesn't make them as repair parts because they seldom fail. If Bucyrus has to make one, it makes up the gear and if necessary flies it out to the user so that it will get there by the most expeditious transportation. We bought several thousands of these gears, which was more than Bucyrus had ever made in its entire spare parts history.

Obviously, if this material were in a stock fund, the services wouldn't buy that quantity. They would have to have issue experience to back it up. Don't misunderstand me. I don't say the stock fund or financial property accounting is the answer to all our problems. It is a system by which we can modify the extent of error if we can plan a little more carefully, and the reason we plan a little more carefully is because the effects of our planning catch up with us, which they don't do now.

QUESTION: My question goes back to the 60 billion dollars' worth of property and the question that was asked as to how much of it is obsolete. It seems to me if we don't know the answer to that, aren't we just a little ahead of ourselves? Here we are setting up the cure for something we don't even know about.

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MR. CHAPMAN: No; first we are trying to find the answer to that problem.

COMMENT: We don't know whether the problem exists in the first place if we don't know the degree of obsolescence we have.

MR. CHAPMAN: I agree to that. The only answer I can give you is, if we don't know the answer to those questions, apparently our systems are not such as will give us the answer. So long as that problem remains unsolved, we are in a vulnerable position.

QUESTION: Are we in a position to set up a cure for something we don't know about? We are setting up a cure for an ailment we don't know the degree of or the extent of.

MR. CHAPMAN: The system we are talking about is intended to permit us to isolate the problem, to reduce it, to find out whether what I have referred to as cumulative error is error and if so, whether there is a logical reason for it. That portion of the equipment backed up by sound logic will remain. We won't have to bother about that. We can turn our attention to the other things which we can correct.

First of all, we have to find out if we have a problem. We must have a system that will identify the problem, how big it is, and where it lies. I defy you to find it under the present system. I believe the other system we are talking about will provide answers. It depends on the ability of the people who use it to develop it intelligently and employ it. It is based on the simple theory that everybody has normal intelligence and that the man who does the work needs to have the necessary information. Our losses occur far down the line. Basically, they are not made in the Pentagon; they are made in the field. If the man who does the work has the necessary information, he will be more careful than he would be otherwise. In other words if he saves seven and one-half dollars, on a nation-wide basis that amounts to many million dollars. That's the theory of it.

QUESTION: Mr. Chapman, I wonder if you might be thinking of procurement funds, of industrial funds, in suggesting that technical materials and parts, big spares and such, can be handled properly in a revolving fund. If we were using a procurement fund that would give flexibility from the purchase standpoint with certainty of repayment upon receipt of the equipment, we would have a fund that would remain clear of obsolete materials. But if we use a revolving fund such as the Navy stock fund (NSF), it is likely to become clogged with obsolete technical material such as the NSF was just prior to World War II. There is such an opportunity, because procurement is scattered all about, and hundreds of activities have lead times for procurement under NSF, for little quantities of material to creep into the fund and then just grow old while they are there.

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MR. CHAPMAN: You are quite right. What you are talking about, I have not discussed. We call it a management fund. It is a clearing account, an authority to obligate and expend funds for the procurement of items which will be paid for by the ordering agency on delivery. It is a clearing account. It actually has no cash on hand at any time. The amount of money it expends is the value of the military interdepartmental purchase request which the procuring agency gets. It is self-liquidating; it doesn't have to have funds; it has no obsolescence factor, since everything the services buy must be taken by the ordering agency and paid for by them.

That would handle the procurement of spare parts. I don't want you to misunderstand me on this question on spare parts. I am not saying that is the answer to the problem. I am reporting that it is under consideration. I don't know how effective it will be. I think it will disclose some very serious situations. In putting them in the stock fund, it will help get rid of these things--to clear them out. For spare parts we would have to capitalize all we have on hand and relate it to the issue experience; sort the information back to find out the volume of spare parts we have which are not usable. We can liquidate them, but liquidation would not hurt the stock fund; if we had liquidated them when we should have, they would not have been capitalized in the fund. We can write them off and they won't impair our cash.

I am not sure I don't voice the same apprehensions you do about funds that have a high obsolescence factor; but they are under consideration.

COLONEL MARTZ: Mr. Chapman, on behalf of the students and the college, I thank you for an interesting and spirited discussion.

MR. CHAPMAN: Thank you very much.

(7 Aug 1953--350)S/ibc

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