



MANAGEMENT IN THE ARMED FORCES: AN OBJECTIVE APPRAISAL

Mr. C. W. Borklund

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Management in the Armed Forces: An Objective Appraisal

4 December 1962

CONTENTS

	<u>Page</u>
INTRODUCTION -- Major General T. R. Stoughton, USA, Deputy Commandant, School of Resi- dent Studies, ICAF	1
SPEAKER:-- Mr. C. W. Borklund, Publisher of Armed Forces Management Magazine	1
GENERAL DISCUSSION	29

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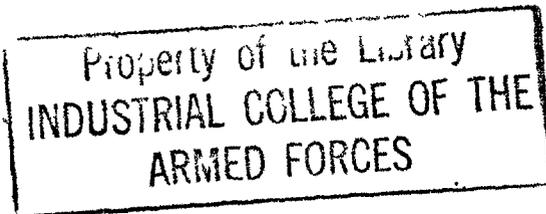
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Washington 25, D. C.

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AN OBJECTIVE APPRAISAL

4 December 1962

GENERAL STOUGHTON: I'm sure most of you in this room have been in positions where you've received the magazine "Armed Forces Management." Our speaker this morning is the publisher of that magazine which has done such a fine job of informing the military services on subjects of management interest. From his advantageous position on the sidelines, so to speak, he has been able to observe the defense industry team and certainly can give us an objective appraisal of management in the Armed Forces.

Mr. Borklund.

MR. BORKLUND: Thank you, General.

As I was leaving my office this morning my secretary advised me to forget this document I have in front of me and just be very informal. I said, "You mean after all the work you've done to put this together you don't want me to use it?" She said, "Well, you know what the definition of a college lecture is, don't you?" And I said, "No," naturally. She said, "Well, that's a man who can't make up his mind from one minute to the next on what he intends to say;" which gives me a lot of leeway, but it may make things difficult for you as far as following what it is I want to talk about.

Before we run into this defense industry jungle today I think it would be advisable for me, at least, to decide where I want to go in this marketplace, as it were.

There are all sorts of ramifications of attitudes and philosophies on the part of both the people buying hardware or requesting development, and the industry people responsible for supplying it. And in order to talk about the basic problems I think it is kind of necessary that I lay some ground rules, otherwise if we talk about the defense industry relationship in terms of off-the-shelf procurement as things were largely done, say, prior to World War II or during World War II, there are certain different problems, problems that are more important to industry, for instance, in that area, than the problems and attitudes of the industry people developing missiles and exotic space hardware and this type of thing.

The defense industry relationship and the forces that work on it are almost appallingly complex. And in 45 minutes or even a couple of days of steady talk I don't believe I could go into all the nuances of philosophy, practices and causes of difference in the few halves of the defense industry team, let alone recommend measures to improve all aspects of the relationship. There are, however, certain basics that apply to all of industry and apply generally to all of the military in this relationship. And there are a couple of situations worth examining in detail, I think, because they will give us some indication of the forces that are always at work on the whole group. I should inject here that my objective appraisal of this is objective only in that I have no ax to grind from a defense viewpoint - since I don't work there - nor do I have any particular ax to grind from an industry viewpoint, because I own no factory. However, some military people who have read a few things in the magazine have indicated that in my business operation I don't have much business common sense, only bright lunacy.

In this environment, as in no other I know of, the real challenge to objectivity is trying to determine what a man really means when he complains about something. For instance, when a company president complains bitterly to me that the Defense Department, in spite of all they say, does not give enough attention, if any at all, to the track record of the company in letting a contract, can he really document this, or is he just complaining because he lost the contract to a competitor? When a military man at the working level complains that his decision-making authority is being usurped by a higher level and is crippling his effectiveness in dealing with industry, can he really document that or is the decision being made higher up because he pushed it up there in apprehension over what would happen if he made it himself?

In any event, the philosophic goal of both sides of the defense industry team, in simplified terms, is basically the same - from everything I've been told in the 5 1/2 years that I've been interviewing and writing about people on both sides of the fence. There are, to be sure, the alley-plan operators, the unscrupulous promoters, the pressure groups, the incompetents, the curious but ignorant outfit attracted solely by the dollars flowing out of the Pentagon. In aggregate they are a very minor part of the defense industry complex. Although, from all the conversations and rules and regulations which besiege the military buyer, you'd think the whole of U. S. industry, or at least a good chunk of it, was just lying in the weeds waiting for a good opportunity to grab the taxpayer and the nation's defense posture by its financial jugular vein. That attitude, incidentally, as I will mention later, is a cause and one of the basic flaws in the defense industry relationship, a sort of industry saying

"How did we get this reputation that deserves so much distrust?" I'll get into that later.

If the philosophic goal is basically the same for the military as it is for industry, then for industry generally the goal is also the same as it is in any buyer-seller relationship. To take the patriotic gloom off the common goal for a moment, it's the same objective that reputable automobile manufacturers and the people who need transportation have in common. And it applies to soap and groceries, medical services, and even going to a ball game. The only real difference is that in the military business we're not dealing with any second-best, as you all know. You're either first, or you're not at all. The object of the game is specifically, in the military case, to develop and provide the best possible equipment in the time needed to meet the national defense challenge, and, incidentally - and only incidentally - it should be at a cost the nation can afford.

In privately and publicly fretting over how to fulfill that goal the military-industry relationship sometimes sounds like a cats and dogs convention. This really isn't, or, shouldn't be so. Basically, the military buyers and the industry suppliers talk a contradictory-sounding language simply because they use different kinds of gauges to measure how well each is doing his part in reaching that common goal. Almost by definition, industry has the same objective as its customer. The difference is that beyond that, the industry people measure "Are we doing our part and can we continue doing our part in the long run by different standards?"

Specifically, then, in weapons acquisition, the military gauges over-simplify it and amount basically to "Do I need this new piece of equipment to do my job best?"

Can I afford it? How soon can I get it?" That is, what is the state of the art? And, "Will what I get do the job better than anything else I might buy?" Well, in industry the measures of achievement within that customer demand sometimes sound more threadbare and intangible, but they are very real to industry. The tangible one, of course, is profits measured in dollars and statistics. But, according to industry, what is rarely recognized and hardly ever appreciated by either many of its military customers or some of the more outspoken members of Congress, is that profits represent a great deal more to industry than just a few bucks they can rat-hole for a party on a Friday night or to buy a bigger house for the employees. Profits represent corporate health. This is basic economics; the strength to continue to function at maximum effectiveness doing their share toward reaching the common goal.

Without long-range profitability there is no industry. And the customer who does not provide long-range profitability very soon finds himself without an efficient low-cost supplier because he loses the competitive give and take. That's what it all amounts to.

There are a couple of other reasons just as basic as profits as to why industry is in the military business. One is no more complicated, believe it or not, than the fact that we are a nation under threat. There is a general recognition and acceptance in industry, from all that I've been told by most of the top-level industry people; that they must do their part in the national effort, and if they don't there won't be any nation to do a part for. The military man in the front lines has no monopoly on understanding that, nor does Congress, nor does the man on the street

shining shoes. The threat is close to everybody. Industry responds to it even when there isn't much profit involved, and often, on occasion, even when there's no profit at all. This does not, however, mean that the military and the taxpayer should take advantage of this attitude to hold profits to nil. Doing that weakens industry or threatens to socialize it and thereby weakens the military user's own supply line, at least, if free enterprise is supposed to be stronger, more imaginative and more vital than socialism as we keep being told it is.

Another reason industry is in the defense business amounts to an outline of the nature of individual companies themselves. A company tends to attract a certain kind of people. The companies most successful in the military business in the area that I want to devote our attention to today have been companies that have attracted primarily creative people. These creative people find in the military field, the most stimulating and most challenging marketplace in the nation. Defense buys ideas often before they are proven, at least by commercial standards. The top companies feel, in effect, that they are merchandising a product - the minds of their men - in an area where the government has a virtual monopoly. And the chief advantage of the brain-power companies as they see it is that if properly dedicated they will be entrusted with more and more technically challenging problems. And if they are, they can attract good people, particularly at the junior seedbed engineer level. As one of them commented to me recently, "What greater asset can a company have than good people?"

There is still another reason. Companies try over the years to build a reputation of service, quality and performance in just about any market. In the defense

business more than in any other they can build this reputation very rapidly and gain far wider recognition for it. So many get into the military marketplace even though they know that with the chance of high rewards goes the chance of miserable disaster. The space business is a good example, and companies do not get into that business just idly or because of the attraction of dollars. They know, or have to know, if they're sensible and smart enough to stay in business for any length of time, that there are high risks involved. Equipment, for instance, must be proved workable the hard way in advance. If it's not, you can imagine what would happen to the commercial sales of, say, an electronics firm.

If one of our astronauts was killed in an orbital shot and it turned out that this company's electronics gear was at fault, in a lot of cases they might as well just close their doors; the popularity of the astronauts, the hero-worship type of thing. For instance, I hate to use a specific type of example - it might give some clues to the people I've talked to in preparing for this lecture - but this one is a clean one because I didn't in this case. General Electric, if the guidance went wrong on the Atlas Booster which GE makes, you can imagine what the sales of their light bulbs would be like on the commercial market. They would probably drop to nothing just because thousands of people would go without lights rather than buy something like this - if this sort of thing happened.

There are other risks just like this. One company built the booster for a now-defunct missile program that was supposed to be, and still is, considered by many of the missile experts - of which I am not one - that this proposed engine design was one of the best concepts that existed, and still exists, in the missile business

today. However, that program failed and as a result they haven't been in the propulsion business since.

There are other risks even if the firm's hardware does work. Risks, as I said, that can drive a firm right out of a particular field. Companies - even very large ones - can be made or broken on a single Pentagon contract decision. In simplest terms, then, the relationship in defense industry is this. The military man knows the operational requirements, or at least he's the most expert brain we have to predict what they will be. Industry has the technical and engineering and production know-how to produce the hardware the national defense experts feel is necessary to carry out those requirements, but if the philosophy is identical the gauges are different but complementary. Policy performance, in other words, should produce policy profits and vice versa.

The defense and industry's specific practices are nothing more than activities designed by both the military and industry to keep their own measuring gauges registering on the plus side and not the minus side. What, then, is all this growling about? Unfortunately, in my opinion, there is a weak spot in the setup. If I may indulge in just a little more theory for a moment; today we have the military on the one hand shopping for answers to operational requirements. Industry providing the hardware answers; and the defense top management people furnishing the procedural machinery designed, presumably, to make it easier for the two halves of the team to bang heads hammering out hardware.

It would solve a lot of problems if we didn't need this procurement policy intervention and review at all. Unfortunately, they provide the money, and so, the

machinery used must verify to them, one; that the relationship is working effectively, and two, at the very top; that the hardware these working level groups plan to concoct, does, in fact, fit the national defense needs.

The fountainhead of today's industry-defense difference is that this policy level group is providing management machinery at a slower pace than the pace being set by the events the machinery is supposed to control. And when this machinery is provided, too little of it takes into account those gauges that I keep mentioning. This deficiency is most glaringly obvious in the analysis of the factors that have led to a tripling in the dollars Defense has spent on cost reimbursement contracts in the past ten years.

I'm sure you don't need to be told of the heightened cold war tensions of the past few years, and I'm sure you don't need to be told either about the technological revolution wherein we've gained more knowledge in the human race in the past 50 years than in all of previous history. I'm also sure you don't have to be told that we forced this technological revolution to its limits in the last eight to ten years, and are pushing it even harder today.

But, we are reacting to cold war pressures, and in that reaction, force-feeding technology to go even faster. We have paid a high price. I do not merely mean the price of forking over a premium number of dollars in order to buy time. We did that too. But at least, as far as this discussion today is concerned, dollars are only a small part of the price we have really paid. The significant price over the long run is the major revolution started and still going on in the defense industry relationship. The measuring gauges no longer register the result of a natural give

and take of a buyer-seller relationship. They are artificially pre-set by rules and regulations, and how positively they will register is a matter of adjudication.

About seven years ago the free enterprise competitive environment of defense industry first became fogged in judgment and opinion, not performance and results, as a matter of historical record. The customer began deciding what is a fair profit. There isn't any other segment of the economy that I know of, where this is done. The customer was deciding what hardware will do the job not on the basis of finite proven engineering standards, but on the basis of what was probably a valid engineering proposal in an area where neither customer nor company had ever been before and no one else had either.

Contracts were let out, and are let out today, on the probable chance that a company would be successful in producing hardware. On a specific problem the challenge was - in the last six or seven years; is today, and will be for some time, - to the creative minds in industry on the one hand, and, in turn, to the judgment of the military on the other, as to just how creative those industry minds were in their answers. And the challenges have been coming thick and fast. With the collapse of time, Defense has gotten into the day-to-day business of obsoleting itself. We have always done this, but it used to be satisfactory to take 20 years to develop a new piece of hardware and nobody else was moving any faster either. Now we have to do it overnight.

Put another way, when we were building B-10s, B-17s and B-25 Bombers, the products lent themselves usually to standard engineering analysis on the part of the customer. When we moved from bombers to things like missiles, which nobody had

ever built before, there were no standard engineering tables, really to refer to, or at least, not enough of them. It then became a matter of engineering opinion of how far are we sticking our necks out. Companies received contracts because they've got some of the best guys in the propulsion field out there, and they've certainly got a plant big enough. They've also been doing this work as much as anybody else in the country in this area. Besides, the other brains in the field are all working on some other projects. This was a technical evaluation, by and large, that the military did, and does. The stuff that was typed on a proposal paper for all the companies, the things that the military man used to sort out, all of these proposals tend to be a lot alike.

In effect what I'm saying, is that it became a matter of military judgment, the best guess as it were, of what was likely; not of what had been proven in tests. Unfortunately for the pleasantness of the defense industry relationship, the defense procurement machinery was ill-equipped to cope with this change. There was precious little machinery around in 1955 to handle this problem as it had to be handled. In fact, most of the machinery amounted to people with the courage and initiative to make tough decisions early and the faith in their own judgment to go ahead and gamble.

One good example out of dozens - a well-publicized one, at least in our magazine - there would be no Polaris today if the Navy had relied on the procurement machinery that existed in 1954. By contrast, Rayburn built his own, really, and today it is one of the best theoretical guidelines on procurement management we have in the defense buying area where judgment is such an important factor. Inci-

dentally, his access to funds is a good case in point. Although he stayed within a fantastically - in my estimation - accurate two to three percent of the predicted cost of the system, he got his dollar increments when he needed them, not when the system said it was time to go ask for more money. The little packages of money that were used to put out fires, speed up developments, and take advantage of technical breakthroughs, he could get quickly, and he didn't have to wait for a budget review to go back and get another chunk of money. This is a big help. The program package thing, in theory at least, that's going on in the Pentagon today is essentially designed - at least in this context - to do the same thing. The only difference is, they have to lay out the plan well in advance, on a continuing basis, and they've got more facts to consider. But, the theory is the same.

I don't mean to imply here also that we've been wallowing around in obsolescent procedures for the last seven years. The first attempt at setting up management machinery which reflected a revolution in the defense industry relationship and the pressures of the times, was the concurrency concept in project management cranked into the Air Force in the ballistic missile systems some years ago. Nor do I wish to imply that this black picture I'm painting is a real revelation of information today.

There's a good deal of activity going on in the policy levels of the military to set up some of the machinery to which I have referred and that I will specifically mention later. Unfortunately, in my estimation, neither are the efforts moving fast enough nor is there enough communication on just what's going on down at either the military or the industry people at the working level who are going to have to

function within this framework. For instance, the basic language definition, this 3200.6 directive out of DDR&E. I've been told by the DDR&E people that as nearly as they can determine this hasn't - at least in two services - filtered down below about the second level of General Staff operation, when it really ought to be out at the laboratories where everybody would know what's going on.

Finally, in the interest of straightening out the problems and causes of difference in the defense industry relationship, there is still precious little encouragement or acceptance given to lower-level judgment. We are trying to codify behavior in an area where there are too many intangibles. The unfortunate pattern of decision-making in the military within the past few years when the military was challenged to use its procurement judgment, has been one of a lot of guys on the same line bouncing up and down and arguing, and never saying yes or no until the decision finally climbed up to the next tier where a few less people would bounce up and down for awhile, until this thing drifted a little higher and finally way up the line the decision was made by some guy who, in effect, made it because he didn't have anybody to argue with.

This decision-making authority has been forfeited at a level where it should have been retained, because that level too often, frankly, and I'm now saying what industry says about it, didn't accept the responsibility; and not incidentally in the process of justifying this buck-passing we have built up some machinery called "non-profit organizations," most of which - although there are some exceptions - in sum don't really do anything more than the defense industry team ought to be able to do itself. Out of all this turmoil have come differences of opinion, differ-

ences of viewpoint, differences in interpretation, confusion and consternation, on the part of both the defense buyer and the industry supplier.

In program packages, in program definitions, and a lot of this other machinery that is fermenting in the Pentagon front office today there are signs that machinery solutions are coming. And philosophically, these things take time. Although, one encouraging sign I heard the other day in the Pentagon concerned the officer who was grumbling about a job that McNamara had given him to do immediately. He said, in answer, that Rome wasn't built in a day, to which, the McNamara aide who had handed him the assignment retorted, "Rome wasn't on McNamara's project list."

However, it's very easy to say "Make those decisions early." It's very tough to convince a smart man in either the military or industry that that's what he should do, when he can see all around him the examples of how exercising judgment has lost a man his head from Congress, from the Renegotiation Board, from his own policy superiors. What galls more than anything else is the requirement for approval of decisions in detail is in effect a reneging on the faith the front office presumably had when they gave the man the project in the first place. And at the military level when such projects as program packages, project management, program definitions, standard performance evaluation, and all these other things they are working on over there, are brought to fruition we'll be in a lot better shape than we are now. But there are men who claim they are close to a cure for cancer too. And people are still dying from cancer.

Let's see how well the gauges are registering right now both within the military

team and between the military and industry parts of the team. There are steps being taken to get the operations and technical and procurement and budget people together as a team where they ought to be - a military buying team - so that there will be a firm, coordinated, unchanging answer to the questions, "Do I need it? Can I afford it?" And, "Will it work?" Essentially, this is what, in my estimation, was behind the Air Force reorganization over a year ago. And there are obvious reasons why it ought to happen. Hopefully, it will prevent such incidents in the future as these.

One service decides to buy a fighter aircraft another service has already developed, by the time they get through with technical changes to get a little bit more for some of their own specific problems, three years later you've got a brand new aircraft development. And you've put so much money into it you can hardly afford to back off. Yet, the initial reason for buying was because of the immediacy of delivery.

The same thing has happened in missilery in specific cases. A service buys a weapon another service has developed, and they buy it for the stated reason that it will do the job and they can have it quicker than they could get one if they'd let a contract to develop it themselves. And what happens - as has? Three years later that tactical missile has been so changed in configuration, performance requirements and everything else, in order to obtain something just a little bit different or better, that in effect, they had a whole new program laid on.

A service issues an order to industry that it wants a tactical missile that will do thus and so and can be produced for so much cost and will be ready at such and such

a time. The contractor meets the requirements, does it for a fraction of the cost, and significantly, because he and the military Project Officer were left alone. The end answer costs \$50,000 a copy. Then, in testing - because this team does not exist, really - the military, or one pocket of the military, sees a chance to improve it. This chance to improve it could have come from either the Engineers or the operations types. And then they see another improvement, and then another, in testing. And pretty soon, the missile costs \$300,000 a copy and the increase in performance is about 3%. Examples like this are almost endless. These are the sorts of things that ~~can happen,~~ do happen, and will continue to happen until we devise practical working machinery to see that the military procurement managers function as a team and not as four separate individuals sitting half-way across the country - in effect - from each other, getting read in on the program only at some given time in its life span and not from beginning to end.

Incentive contracting is much bally-hoed, and in concept, it ought to be, not because it will crank more efficiency into the manufacturer, but because, - hopefully - it will crank more efficiency into the Defense Department. Without this team cohesion on the part of the military, however, we will continue to have the mess we've had in the past. Cost over-runs everything anywhere from 300 to 1,000% as a regular pattern; time-lags and delays which almost always have not really been necessary if we could have controlled technical changes, encouraging early decision-making and probably most important, know at the start where we are headed. This decisiveness in the early stages is essential if defense wants to get the most it can out of the total industry resource available to the country. The tough part, of

course, is to determine what you really want, in advance, and stick by it.

We cannot afford, however, the number of parallel industry efforts in conceptual studies that exist today, distracting engineers on what for most of them will largely be unproductive work. Without this team cohesion, CPIF - Cost Plus Incentive Fee Contract - for instance, is going to be a greater weapon in the contractor's hands than in the government's. Incentives are going to force the government to coordinate these four groups much more than they are coordinated now. Else, the saving that defense looks for in CPIF contracting isn't going to come. Industry can react much quicker than the Pentagon can, as McNamara found out when he first took office. He wanted to get the operation going quickly, but the machinery just would not turn around quickly enough.

Instead, because of this, we see the enlargement of an already large force whose sole job is keeping score on performance. In some companies there is already one man for every three men on the production line, just checking to make sure that he is doing the job according to the specifications performance-wise, etc. The number and size of inspections is already approaching, in many industries, the ridiculous.

Still, there are, rather publicized efforts to build this team coordination and communication. It is being worked on; it's not solely unnoticed. Industry today is not nearly as optimistic that the solutions to their problems are just over the horizon. Part of this difficulty is their own fault. They have failed atrociously in doing basically a public relations job in explaining what their marketplace motivations are all about. Failing in this, industry has had to live with the bad reputation and the mistrust it has today, or at least it feels it has.

One of them summed up to me, "Nature abhors a vacuum. And all these things we don't like - the non-profits, the developments-sharing costs regulations, the mis-directed use of incentives, the ASPERS, and all of this, have moved in to fill gaps where we haven't done the job we should have of explaining ourselves."

Well, you should be as concerned about their rewards or lack of them as they are. In the inherent nature of the free enterprise competitive system in America, if your contractor is unhappy with you and the market you represent, then you are in trouble. If the marketplace becomes too unattractive he'll leave it, no matter how much patriotism he has; it's a matter of survival. And the people who come in will ordinarily be the less than best, and we can't afford that.

Let's take a brief look at his guages of success; on profits plenty has been said already. An industry, in my estimation, shows far more awareness of what profits mean to the total national defense effort than do either the military buyers or the Congressmen who spend considerable time, effort and energy, discussing these profits, on the aberrated assumption that profits are a terrible thing in this insurance business. This is nonsense, of course, but to uneducated people it looks good and it can get you a headline.

How much concern should we have about profits staying high enough that companies can continue to prosper in competing for this business instead of what a lot of them fear right now, operating as, in effect, government-controlled, non-profit institutions? I'll give you a good current example. A U. S. company can get a contract in Germany today almost as easily as they can get one in the U. S. The reason is that German companies aren't interested in their own market. Why? It's very

simple. Because the German Government will not allow any more than a two to three percent profit figure, which, incidentally, is very close to the regular pattern of U. S. industry. Consequently, the U. S. companies can go over there and obtain contracts because German industry doesn't compete.

This is the sort of thing that can come, turned in reverse, between the military and our own U. S. industry as a result of emphasis on price and not performance. But there is more than just income that galls industry about the Washington emphasis on profits. It is not profits which cost the government; it is costs. Clobbering profits is, in effect, clobbering a fly with a sledge-hammer. Costs are what the government shells out, and profits, according to most company earning reports, are only about two to five percent of the total multi-billion dollar figure.

What do they mean when they say "costs?" Well, for instance, the initial price that appears on a contract. Today there is a flurry of activity to cut this price lower and lower. Where this flurry is being applied it is inviting loft operators into the military field, picking up production contracts for prices that companies with the brain power to do the development in the first place, can't touch. This burns, naturally, most companies anxious to do a job for the military.

Defense, when it comes to production time, places - they say - no price tag on creative brains. The government requires a greater percentage of resources of engineering talent than any other marketplace in the economy today. Yet, the companies that maintain that brain power are told, in effect, when it comes time to making money - which is where you make money on production contracts - so and so down the line under-bid you. Of course he did. He has only a tiny engineering

staff. And most of them are people who just see that the assembly line keeps operating. His costs have got to be inevitably lower. We must get off this middle ground; either do the development ourselves with our own arsenals and laboratories, and turn production over to industry - which would be hazardous on these complex equipments because there are almost invariably engineering wrinkles to iron out on at least the first production run, and the companies will not be equipped to cope with it as fast as if they started out on the production run, or in the R&D, or else, let's give the first production contract to the man who did the development.

No one has ever kept track of what mesmerization with the lowest initial price has really cost the government in the life-span of equipment. But the results have gotten to be horrendous. And we ought to find out on some of these equipments what has happened to a contract after we accepted the lowest initial price; how much money we had to pour into the company to get them operating the way they're supposed to. How many rejects have we had in relation to a competent company doing the job and presumably not rejecting?

These things, as far as I know, have never been pinned down. And yet, they ought to be, because of the significant figure of the total cost to the government, of the hardware.

Finally, this emphasis on price forces the current pattern to run exactly contrary to the military demand today on industry. Defense demands more R&D in proportion to production runs, but scorns the needs of the companies that built up the capability to provide that engineering talent. And what is most appalling to the companies, they are convinced that the government pays probably an appalling or a

premium price for that hardware anyway. The lowest initial bid does not really mean, if we would analyze it, that you got the equipment for the lowest possible price. Industry has always considered that its track record, or the track record of its equipment is what really counts. How long does the equipment last? How well does it operate? How much does it cost to maintain? All of these things are given little if any consideration in an initial price proposal evaluated by the military, particularly when it goes from technical pocket to procurement pocket to budget pocket. These things get lost.

I know of cases where the military evaluation of the company's capability amounts to sending a man out of the Pentagon who had just been transferred in from a fighter squadron and asking him to look through the plant on that particular contract which was just let fairly recently; because the evaluation was not done by somebody who was professionally trained in evaluating facilities, the government is now in trouble on the contract.

There are no formal up-dated files on these manufacturers. There are files here and there, but the Navy, for instance, cannot push a button and find out how the Air Force made out on an electronics contract with so and so on a piece of gear that is like what they want to buy. The files, where they exist, are in even worse shape, in fact, than the libraries that we have for the exchange of scientific information, and they are in pretty bad shape because of this lack of coordination, comprehension, etc.

What are the other industry gauges? How about the encouragement to creative know-how? If the company is going to hold onto its people it has to encourage them.

If we are going to encourage the company to hold onto its creative people we've got to encourage that creativity ourselves. Are we doing a good job here when at least three companies have told me within the last month that they estimate only about 10% of their engineering time is spent in creative work? The rest is spent in filling out reports, punching time-cards, and briefing groups of government visitors who really don't have anything to do with the project. How much do we encourage creativity when we let a company do a prototype piece of hardware and then pass the drawings around to all their competitors so that everybody gets a chance to bid on their production contract? A chance which the prototype developer knows wipes out most of what he felt he was gaining in going into the prototype development at small profit in the first place.

Thus, the sharp companies conclude that the only way to stay alive from development into at least the first production run, is to start planning in engineering changes toward the tail-end of development. These changes start coming in then, and the other companies, and indeed the military's own paperwork, can never quite catch up to the new model that is now on the drawing-board. So, they get the first production run. That's the marketing theory. Do a little bit more for the customer than he really expected and you'll get the first production run. They would get this much earlier if they didn't hold this back as a selling tool on their production contracts.

CPIF, theoretically, is supposed to eliminate this, so let it. And when we do, the engineers and scientists in a company's creative department, the indispensable resource we want to keep, will grow sadly disillusioned because they will know from the start of the first feasibility study, that each contract they win is going to do

nothing more than give them a chance to compete on the next one, and that when they finally get down to the end of the line they may never be identified with the program, even though it was their brains that put together the bread-board model. This is very tough on the creative mentality of an engineer, from everything I've been told.

How good are communications between the military customer and the industry supplier on these problems? They're even worse, really, than they are between the defense policy makers and their own working-level people, and they're pretty bad there, as I mentioned earlier. For instance, the reaction to General Schriever's Monterey conference, by comparison has been fantastically good. The things he is getting out of that session there are still paying off and will continue to do so. The standard industry complaint is that it's tough to find a man in the military who will make a decision - that is, authoritatively - for the defense customer.

At the military level, significantly, industry says the services all reach a source selection decision very quickly. Why, then, does it take sometimes as much as three times longer to evaluate a technical proposal than it does for industry to prepare it? The approval routine is what soaks up time. Review before a contract is let and review before a change proposal is okayed - even after a contract is let - is, said one industry president to me last week, killing us.

I would hope that the Pentagon front office is forcing these reviews for an admirable purpose. They want to discipline the working-level military side of the team to effectively use things like program definitions, project management, program packaging, and all the rest. Once they have everybody speaking the language they will gradually back off, presumably, and let the military resume their decision-

making role.

It was encouraging, for instance, to note that this happened largely on the TFFs in spite of all the publicity that was given to the fact that McNamara and the DDR&E people were holding up the award. There were only two instances where McNamara or the front office at the Pentagon got into that program. One was at the outset when McNamara said "Why not one fighter?" And the second time, somewhat down the road when it began to look as if the Air Force and the Navy weren't going to be able to iron out their technical differences. He came back and said, "Iron them out." Other than these two times, McNamara himself, I understand, is quite pleased with the fact that that whole project was a coordinated complementary effort on the part of the Navy and Air Force types. They were speaking, in effect, the language he wanted them to talk.

This backing off, however, is going to come only ^{as} fast as the military side of the team learns the new language. Rayburn ran his shop without OSD interference, largely, because he had the language even before it had been written down. So, to a large extent, when he was at Ballistic Systems Division - it was then - did General Schriever. So, to a large extent, with the project people in the Army Materiel Command, hopefully, once the bugs are shaken out of the organization. At least, this is the objective. But how soon? The biggest headache that industry mentions today within the area of communication is the lack of quick decisions, even down to little things.

I have two specific suggestions in this communications business that may help. One has been kicking around for a long time, but nothing appreciable has been done

about it except in a couple of highly successful instances. Stop rotating officers out of projects. There isn't a program that I know of in the last seven years that has been brought from the drawing-board to operating hardware within three years, at least the major big important dollar items. Yet, that three years is what Personnel people generally take a transfer on. This hurts the military far more than industry. Industry may have a tough time finding a man they feel they can believe, but the military is even worse off; they lose six months or so, they estimate - the people I've talked to - of competent direct management on a program while a new man is educated; the stop-start business; let's proceed cautiously until I know what we're doing, which is normal, human and understandable.

If we had the same man on a project for its life-span and he was assured that his career was not going to be jeopardized, we would have much better project management. He'd be close to it. Particularly in bidding on contracts, companies have found that if they run into a man who gives them an unsavory answer they can check his rotation record. Sometimes they can keep a sweet face, turn to their defense customer, instead of making a fuss, and in four or five months - if they can propagate a delaying action, which is usually possible - they will get this road-block out and a new man in. He, they hope, will give them a more favorable answer.

My other suggestion; when a contract is let why is there not some machinery set up to tell the losers specifically why they lost and why the winner won? Or do we have so little faith in our own judgment and so much fear that the real reasons will be discovered that we are afraid to tell them. It's supposed to be an axiom that from your failures you learn how to succeed. We don't give industry this benefit.

They've got to guess. And in the maze of thousands of military people they talk to, all with thousands of differing opinions, they get all sorts of answers on why they lost the contract. And they're mostly inaccurate.

All these things make it increasingly difficult to do business with what is already the toughest customer in the world. Hardware development challenge is tough enough; why add these arbitrary, unconstructive, distracting hurdles as well? That's one advantage that the Russians have in the shortness of their pipeline; that these road-blocks, these artificialities they don't have to deal with.

In sum, using cost reimbursement is another example. I discovered yesterday that I needn't pontificate too much; all I need do is quote the Assistant Air Force Secretary, Joseph Emory, who said recently that the cost plus fee age is helping no one and should be ended. I quote, "It causes over-management, high costs, low profits, questionable reliability, while eroding top management instincts prevalent in commercial business, and at the same time it fosters over-control tendencies of the government."

One final word. Politics and its over-riding threat to the whole environment, I hold no conviction about the existence of the military-industry alliance which former President Eisenhower warned of when he left office. To wave the flag for a moment, I talked to an awful lot of people both military and in industry in the past 5 1/2 years or so and I never found them so undedicated or even onerous that this sort of thing could ever possibly be created. The impression may come from the fact that at the working level they get pretty close together on mutual problems and they do in fact become a team on a specific project.

I do see the threat, however, of a politico-industry alliance. To some extent, of course, I suppose politics will always be with us; it's unavoidable, but it must be controlled. And I think we've gone a little bit over-board in the past five or six years. Defense today with its massive budget can prime or depress whole segments of the economy. It can change management of companies; it can even change the nature of the companies themselves. It's a powerful influence, and in the last five or six years, Congressional pressure on that power has increased. The Congressmen have found a new pork barrel that is far more delightful than just rivers and harbors. They toss out more baloney, in my estimation, about defense contracts, under the guise of protecting small business or the unemployed, than they ever do on their pork barrel projects.

Until recently, about the only place that politics played a part in company activities was in labor relations. Now large companies have to maintain Washington offices or at least Washington representatives because political activity affects the companies individually and not just as groups, which was something associations used to be able to handle. Certainly, it is a major political advantage to be able to make an announcement about a contract leaving the inference that the politician had something to do with getting the contract for his district even though he may not have had anything to do with it at all. But letting politicians decide or exert enough pressure to decide where a contract is to go, is a mistake.

If we were in an area where there is a large amount of judgment, this outside influence can have a considerable effect, at least from the rumors that are charging around industry today. This political influence also tends to pull industry away

from close contact with its customer. It makes him doubt the wiseness of relying on a military customer's initial decision. Unfortunately, the only control I see at the moment is encouraging working-level military decision-makers to stand up and argue with Congress, to back their own judgment. The politicians can be argued with. Most of them won't go out on a limb where there is a technically better proposal on a project. And invariably when there's a question, when they are appealed to by a company they ask how good is your proposal and how good is your performance record. My point is that lately they haven't been argued with enough, or at least, the military hasn't explained its position on major contracts with industry enough, which goes back to the recommendation I had earlier that we should explain to losing companies why they lost.

There is an amazing number of rumors, as I mentioned earlier, charging around industry today, about the decisive political influence being felt in defense contractor choices. If this accusation isn't cleared up, industry will soon be doing all its real selling - as far as it is concerned - on Capitol Hill, in the White House, or at least in the Vice President's office.

To wind this talk up, very few of the ideas I've thrown out here today are unique with me. They are attitudes prevalent either in industry or in some pockets of the military management organization. My complaint is that the solutions aren't being worked on, or aren't being worked on with a high enough priority. And where answers are being put together they tend to ignore one cardinal principle at the heart of the defense industry differences. That principle essentially amounts to this: What really makes manufacturers inefficient is not the caliber of their own management,

but the demands of the customer.

Thank you.

QUESTION: One of your major points was that we should tell industry why they failed in their bids. We let about \$20 million worth of contracts in the Department of Defense. Half of this is subcontracted by industry. Industry is making this complaint and you seem to agree with it. Why have not they found ways to tell their subcontractors why they did not get their bids?

MR. BORKLUND: Frankly, this is a major problem with them. In many cases they do. In other cases they don't feel it is their prerogative because the subcontract is actually directed by the military. And, in any event - well, in the major weapons systems; for instance, go back a ways - I can't remember the specific program now - but the fire control equipment on one aircraft was directed to the prime manufacturer that they let that contract to; I believe it was Hughes. He's one. In any event, what it amounts to, really, is the subcontractor-contractor relationship by and large is a lot closer in this regard. They've dealt with most of these people themselves for a long time. They already know in many cases. Where they don't, as I say, to them the big problem is finding out from Defense why they lost.

The subcontractors can go to them, I think. If they themselves know, they could tell them. They usually have; at least that has been my impression. In other words, what I am saying is that I'm not aware that this is a major complaint on the part of the subcontractors.

QUESTION: I would like to add to that. I have had three years of experience

with one contractor. I was right at the plant. They had reasons and rules to preclude ever telling a subcontractor why he didn't get the contract. I am pursuing it just so you will have this information also.

MR. BORKLUND: Which I appreciate. But I say again, if it is a major complaint, why shouldn't they know? And basically, if they are guilty of it too, they ought to do the same thing.

QUESTION: Sir, what is industry's reaction to an incentive arrangement under which they have an equal opportunity to prosper or to lose?

MR. BORKLUND: You mean just straight competition?

QUESTION: In other words, if they over-run in time and - - -

MR. BORKLUND: (Interposing) In other words, the CPIF type?

QUESTION: Yes.

MR. BORKLUND: Well, I brought part of it out in my talk. Generally, they are encouraged; they are happy about it. But in a lot of cases they are elated about it not because of their reaction to the admirable objective that I heard stated in the Pentagon that this will crank more efficient management into the company. They feel at the outset if the ground rules are set; they're not changed half-way through the program, which theoretically you'll have under CPIF, they'll have a better chance of producing, themselves, and making more money. It's encouraging to them because it's a step back, in effect, for fixed price bidding.

A lot of them who have publicly said that CPIF is wonderful are saying it because for instance, on the TFF, you could make a pretty good case for why wasn't that a fixed-price contract? We know quite a lot about aerodynamics from the evaluation

standpoint. Why give them the assurance which even they don't want, of protection on their costs? I've had at least three companies tell me that it's fine as a first step because the potential rewards are there, not because they think they need to have some product to produce more efficiently. Logically you don't find people of the caliber of the presidents of these companies getting up to that level because they inherently like to waste money and waste resources. They can see advantages to them here. It's more of an advantage to them. It places a demand on the Defense Department. To them it's a step back for fixed-price bidding, which they would all prefer to do.

There are, of course, these high risk exotic programs where you're going way out and where there may be cases where they think they may be taking too big a gamble. But we're beginning to move out of that area now. There are a lot of companies that have had experience enough in the space effort. And even in things like the TFF, let's go one step beyond. Why can't this contract be a fixed-price operation? This is the way, at least, the ones I've talked to look at it. To repeat, it's a step toward the basis on which they would rather do business with the Defense Department, but we've still got a ways to go.

In other words, they're worried, for instance, about what this team cohesion or lack of it is likely to do to their position on the CPIF contract. They're worried about what incentive they're really to get if they go back to a renegotiation on this cost plus incentive fee type of arrangement, and might lose some of this money. It's all a matter of judgment and this is the part of it they don't like. If the ground rules get changed because of technical or engineering advances, in theory it throws

the whole contract open to renegotiation. However, they've got a stake in this thing now and they lose some of their bargaining power in an engineering change. In other words, they can't just say, "Well, if you're going to be that way we're going to throw the whole contract out and forget it. This is illogical - ridiculous." But, it loses them a little bit of their bargaining power after the contract is let. If the military comes back and wants to make an engineering decision they don't have quite as much leverage on how much this is to cost, etc. So, it's not all wonderful; it has its drawbacks.

QUESTION: You made a point about the fact that at the lower military levels we have not resisted Congressional pressures enough and that there are a rather important series of rumors going around that political decisions strongly influence the placing of military contracts. I would like to ask a question that is a bit complicated. Have you noticed any particular political influence in the placing of NASA contracts? If so, do you think it is true that there is low-level pressure against NASA procurement officials, and if not, are you perhaps aiming at the wrong target?

MR. BORKLUND: I think the first part of the question - the inference - is correct. There is pressure there just as there is - in fact, possibly more so - than there is in the military. The pressure is there in both cases, but at NASA it tends to be even greater on some of these things because they don't have there anything other than just a prestige race to force somebody to back off. At least in the military - and you can find them - there have been guys; there is one, I was told by one company last week, there is one guy who put his job on the line as a working man.

In answering an individual query by a Congressman about why didn't the con-

tract go elsewhere - to his district - he in effect put his job on the line as far as to whether that decision stood or not. Well, this is a pretty tough thing to ask a man to do, I know. And really - let me make this clear - I'm not blaming the working-level man for not standing up to this challenge in a lot of cases. The support has to come from the policy-level people in the Pentagon. They're the people who should bear the brunt of this. Theoretically, they are the spokesmen to Congress on some of these things. For instance, by a good contrast in the information business I'm in, I think it was a year ago, John Moss, I believe, was conducting an investigation of the "squelching of release of information" in the Pentagon. And he asked McNamara who, specifically, in Arthur Sylvester's office were the people who were allegedly sitting on information. McNamara said, "It doesn't make any difference as far as you and I are concerned. Anything done at the Pentagon is my responsibility, so if you have any complaints tell them to me."

Well, this philosophy obviously, then, exists. The main reason I point this thing out here is that it has ^{gotten} to be transferred over to this political level. A good example of when it gets rough, frankly - and this is just between you and I, I hope - is in the case of McNamara's decision on the RS-70, and the reaction from Uncle Carl over on the Hill and a couple of people over there. He organized a two-man subcommittee to do an investigation of the Defense Supply Agency. All of this commotion that went on, really, as far as most people on the Hill and in the Pentagon were concerned, was prompted solely by the RS-70 decision. So, it's not an easy thing to do, to stand up to these guys in some cases, but I think it has got to be done. For the same reason that industry keeps Washington reps here to stand up

to these people.

When you happen to be on the winning side and some Congressman tries to take the contract away you let the politician get away with enough of these things and pretty soon you've lost control of your own operation. They'll be telling you. This is the heart of the argument between McNamara and Vinson, really. McNamara has taken control and some of the things that used to be by default Congressional prerogatives are no longer necessary. It shouldn't be necessary, for instance, for McNamara to go get approval from the House Armed Services Committee, as in one little project that's going on now to place a military packaging laboratory up in, I believe, Pennsylvania, under Defense Supply auspices. You know, where they can do packaging-type research for all three services. It makes a lot of sense.

But the pressure of this RS-70 thing etc., has been such that at least, right now, overtures have been made to Vinson "Would this be all right with you?" That sort of thing shouldn't be necessary, and yet this is what can happen. At least right now if it's not a true fact that some of these contracts are being let under political pressure, this is the industry impression and it should be cleared up one way or the other. I think, myself, that the charge is true. If so, this sort of thing has got to be stopped. But I repeat, I'm not criticizing the working-level types for not every time they get some pressure from Congress, standing up and laying their job on the line. Protection has to come from OSD.

QUESTION: Mr. Borklund, you made the point that you are viewing with alarm the privileged position of not having to have responsibility in carrying out a program. You referred to several examples without specific facts. I would like to

direct you to a specific area in which you were talking about a tactical missile which was started off at \$50,000 by one service, to be used by another service, and which, by a prolonging tactic, was modified up to \$300,000. What specific missile were you talking about?

MR. BORKLUND: I believe - let me look at my notes - you've got the two of them mixed up. The one I referred to of one service buying the other one - this doesn't go any further does it? Because, quite frankly, the basis on which I have all these comments from industry is that I'm not going to use any industry names; that it won't get out into publications. I'm safe there, am I not?

The missile that one service bought that another one had developed, ended up with a completely different configuration by the time they got through, and that was "Bull Pup." The one that the service had a company build for \$50,000, and the present version, the version that was finally put into production - the last model which cost \$300,000 was the Matador. It started out, a man from the Martin Company, Bill Burgett, and now General Garrity, put this thing together down at Canaveral some years ago. These are Burgett's figures, incidentally.

For instance, they went to a junkyard and they got some galvanized pipe to use as the housing for this propellant. He says - and I don't know anything about the engineering side of this thing - but he says it's the only reusable propellant container in the missile business today. I think he got four of them for \$100 or something like that. Well, the new version with all the engineering changes and that sort of thing, the striving to get just a little bit better, went to \$300,000. Now, this is not the only example; there are a lot of others where modifications and continuing attempts

to get improvements never got related back to what the original job was supposed to be. So, we double the price in order to get a 5% improvement in performance.

QUESTION: What is industry's reaction to the so-called pressures being exerted by the Executive Department on management and the union shop?

MR. BORKLUND: They're not happy about it, naturally. They feel this problem can and should be worked out between industry and the unions. Naturally, you have the over-riding factor of this being a defense industry and it's very important that they keep operating. However, what they do object to more than the fact that government has intervened to try to solve or settle the strike problem, is the approach that has been taken from the outset. That is, that the unions have been right ever since this thing began. Just about every company on the West Coast, at least from what I was told, that was initially involved in this, felt the way Lockheed still feels. The only difference was that the rest of them, as they put it, knuckled under, whereas Lockheed decided to stick by its guns.

It's not so much the government intervention they object to, it's the fact that the government intervention, they feel, has been biased.

QUESTION: Mr. Borklund, you spoke of firmly endorsing the decentralizing of decision-making authority to a very low level. My question is, what system of management control would you propose to control the coarse proliferation of decisions at low level to insure coordination likely in a very fast-moving program or series of programs?

MR. BORKLUND: I go here to what is really a certain extension of what Secretary Gilpatric said two months ago for publication in our November issue. The

machinery, at least in theory, exists within the military today, and at least within the Pentagon it exists, and the coordination exists within the Pentagon today, so that they - at least as far as they are concerned - they can sort out the very big problems; the decisions that amount to maybe hundreds, that can be handled very easily, according to Gilpatric, by the people in the Pentagon. The thousands of decisions on fast-moving programs, which even he wants handled at the lower levels, can be handled if they're all speaking the same language. This is - at least if I interpret General Decker's comments correctly - this is basically what's behind the project management emphasis in the Army Materiel Command.

These people will be able to keep track of fast-moving programs right at the working level. There is reporting machinery, or will be one built up, so that any red-line type of thing they can fire right into the Pentagon if they need - if it's a major problem; if they require something more than their own immediately-available resources, to solve. There is machinery there to let people handle decisions at the working level, on a decentralized basis. The problem is, it's not being used.

If I may extend this for a little bit I think one reason is the impression that has at least been discussed and has not been documented, is that decision-making is being more and more centralized in the Pentagon. I don't think this is so. The big decisions are being made up there. There are a lot of pages being rattled up there because the military people at the working level didn't make these decisions themselves before. It wasn't too much their own fault. There was a lot of autonomy existent in the military before we finally got a Secretary of Defense who, plus his own personality, plus the machinery like program packages, enabled him to grab control

at the top level.

To quote my magazine in the December issue, John Ruben says, "We make these decisions only because the people at the working level don't make them themselves. We stick our nose in." But, this is basically what he said. Anytime a program is constantly in trouble, is constantly being badly managed - in effect the manager is not making the right or fast-enough decisions - these are the programs we stick our nose into. Rayburn's Polaris program never got messed with by OSD. Army Materiel Command's operation - at least according to what Besson has said - the various projects in that operation are not going to be messed with by OSD unless something goes wrong. Well, this is their job.

But, the more of these things we let them do just because they establish a precedent on one program, the more decision-making is going to drift up toward the top level. Pretty soon you've got what has happened in a couple of recent cases. And I agree, there's a lot of this going on. In a couple of recent cases the front office at the Pentagon was in fact managing programs in detail, but only because the guys at the working level weren't doing the job themselves, or didn't want to for a number of reasons.

QUESTION: In response to an earlier question you indicated that you believe that there are, in fact, improper pressures - political pressures - being exerted on Procurement Officers. According to your prepared remarks you included in this political influence, the President and Vice President. Do you have specific facts to support your belief, and if so, would you cite them?

MR. BORKLUND: If I had specific documented facts I could go to court with

them. What I said in that context, the one sentence I said in there was the key one. These convictions exist within industry and even among military people today. Whether true or not, this has to be straightened out. If it isn't it's going to be a divisive influence. It confuses the industry man as to just who his real customer is and also, so what if I give a man a good performance or a good bid proposal? It may never get to first base because I sit out in an area where there is a lot of employment; we've already got a lot of defense contracts. And so and so is down the road in a labor-depressed area, or he has a lot of small business support for his own company - this type of thing - and the contract isn't going to go to me, even on merit. There is this depressing influence.

I privately believe that these pressures have been exerted. The coincidence of time, for instance, in some of these cases; the backup of just how the sequence of events occurred and just what specifically happened, lends an awful lot of credence to these accusations. No, I can't prove them. If I could prove them, the guys who are guilty - if they are guilty of this sort of thing - would be a lot dumber than they really are, because the documentation would be too easy to come by.

Most, for instance, Congressional pressure at the Pentagon is handled over the telephone by Congressmen in various offices. I mean this stuff that we are talking about here.

QUESTION: Mr. Borklund, do you feel that you have adequate access to information within the Defense establishment to keep your readers properly informed?

MR. BORKLUND: I do. Of course, we're in a little different area with Armed Forces management, than the daily newspapers or something like that. But I have

never found any difficulty. There are times when I have been told something and was told I couldn't print it, and there have also been times when I have been denied something that I thought I had a right to. But these cases don't happen very often. I find that if you go to a military man in a key position and tell him that you just want to hear his story and you want to print it the way he feels it is, you get pretty good cooperation. I have.

QUESTION: Sir, without being disrespectful, I must admit that your talk within a certain field I have a hard time accepting. I have been one of those cogs at the working level where the wheels made the decisions, for the last 12 years. I must say, from my observations and my end of it I don't feel that I have failed to make decisions and pushed them upstairs.

I have observed people in the Air Force, and occasionally in the Navy, and I have not observed them fail at the working level in making decisions either. I wonder if you could be a little more specific and tell me which example or which group of examples you base your talk on, of where these people fail to make decisions, and push them upstairs, this being the reason they handle decision-making at the Pentagon. I can't understand that.

MR. BORKLUND: Maybe I'd best go back and define - at least in the context of this talk/^{what}I mean when I say - at least in that instance - when I say the working level people. We're a cut above the man who is sitting across the negotiation table from industry. When I refer to the working level people here I'm talking about the people who - well, I'll give you an example - and this may help. In the initial stages, on the TFFs, when McNamara stepped in, in that area that decision got bucked, fin-

ally, all the way up to him because on a cooperative basis, understanding that this was the objective, and that there was only going to be so much money, so, obviously, there couldn't be two fighter programs as had been proposed and approved during the Eisenhower Administration.

That decision got bucked to McNamara because the service people didn't sit down and say, "Let's make one together." The decision gets bucked and we're in basically what is commonly referred to as the inter-service rivalry area. Now, there are good, honest, acceptable reasons why there is a give and take, an argument. The point is, unless, say, ^{an} Army and Navy Committee, if you will, cannot come to an agreement on one of these problems it's going to get bucked to McNamara. I had an example of that that I was going to give you, but I've lost it now.

Well, the problems of the Air Force and Army on close air support and what kind of hardware might be needed; this is an area. From the Air Force's view this has always been a secondary problem. The Army has always felt it was very essential. Well, these types of decision, unless they are resolved by these people who know better than a McNamara or me, or somebody without further combat experience, etc? They know these answers better than the people up on the level higher. But the people on the higher level end up making the decision and they make it on almost an academic basis. In other words, they read one recommendation and then they read another recommendation, and they say, "All right, we'll do thus and so."

This is the area I talk about, anyway, when I say the working level. I don't mean the man who is closest to the problem has not made these decisions. I mean in the area of what hardware do we build next. Industry is concerned with this too.

They're trying to market their whole defense industry effort for the next five, ten or fifteen years and predict where the market is going to go, because of this lack of decision at the military level. In other words, they couldn't rely on the Air Force four years ago when the Air Force said that we were going to have a B-70 program. Even then they didn't feel that they could rely on that statement because they felt the thing was going to get bucked up higher; that there were going to be some arguments. This is the type of thing.

QUESTION: Sir, I know that the Air Force project on these Bull Pups was purchased under the 180 project.

MR. BORKLUND: Well, all I'm going on is Bill Bergen made them, and this is what he told me. He was in on the program. He said the final version got so modified that actually if you go back and look at the original, as far as he is concerned - and he is an engineer - they are two completely different missiles; they ended up becoming two completely different programs. And from his own production schedule operation, as far as delivery is concerned, he said flatly that the new version - the version that was purchased by the Air Force, amounted from their viewpoint to a whole new development. They couldn't just go right out and buy off-the-shelf, these first Bull Pup models that came out; which was initially why they made the decision to buy it, according to him. Now, you can argue with him about who is right.

QUESTION: I would like to carry the Bull Pup thing just a little further. Did this engineer ever show you the past three years of one contract for machine proposals where they had re-engineered about 12 different proposed new types of Bull

Pups? They do everything except turn pabulum into Indian silver. Or, the way that they could have multiple, multiple factories? Or, did he comment at all on the fact that while we were procuring for the military only limited numbers of Bull Pups from Martin our national stockpile objectives were in the multiple, multiple thousands for all of the services, which could not possibly be handled by one contractor and in which the requirements for multiple mass-production in multiple factories were very certain that they had to be well-established to be of service?

MR. BORKLUND: Is that a question, or a statement?

QUESTION: Yes sir. You have the other information and I assume you have this also. I thought you might like to comment on it.

MR. BORKLUND: Well, basically, his comment revolved strictly around the theme of one service taking the product that another one had developed, and the engineering changes. Now, if the engineering changes - and I recognize, as I mentioned when I first started out, it's hard to figure out what the motive is for this guy when he's giving somebody hell. The engineering changes may have been propagated by Martin. But if they were, why were they accepted?

In other words, if you had a development that would do the job, why accept a change to get something a little bit better - he says? In other words, if they are a problem, if they exist, and if they are a costly problem - as they are - why accept them, if they're coming from him, or why propagate them if they're coming from here unless you absolutely have to have that 5% performance extra, or something like that?

QUESTION: Sir, during your talk, at one point I got the impression that you

were acknowledging apologies for the occasional advantages of management of all U. S. industry, where they place responsibility for the national problems within the government. I've had the contrary impression that part of what has happened in the cost-plus-fixed-fee environment is that there is a certain amount of feather-bedding on the management level. We have some layers of incompetence very often that impede a fast movement of any management in industry. And it is particularly apparent when you compare it with some of these fast-moving Europeans inside the Common Market. They are going to give us a lot of trouble in the future, partly because of the attitude of their management as opposed to ours. Would you comment on the relative capabilities?

MR. BORKLUND: You mean between U. S. industry and European industry?

QUESTION: Yes.

MR. BORKLUND: Well, my exposure to European industry is rather limited. I've only been over there three times for any length of time where I talked to people. I get the impression, really, that from a management standpoint they are no better off than we are, but for different reasons. But as far as efficiency is concerned, basically it's the same either way - as far as whether there's going to be a factor in competition or not. I mean, they've got from the economic standpoint just as - the economic record for the past 15 years - they start off with an advantage; lower labor costs. And when they get the Common Market going, lower transportation costs and this type of thing, than we have, because our economy was already out there; we had a high level.

But on your basic statement, I'd like to comment about that too. Sure there

are examples. I mean, the statements that I made here aren't by any means black and white. There are a lot of good examples which completely contradict everything I've said in here. What I've tried to do - and admittedly - is tough. I should think it's tough for anybody to do. It's a weighing of percentages, almost; how many complaints as against how many good situations. Sure industry is guilty of featherbedding, I think, under cost reimbursement contracts. You can dream up an awful lot of things if the money is not coming out of your own pocket.

It would add, in your estimation conscientiously, a little bit more to the program that would give you a little bit more control. But I believe that, in sum, the majority of the excessive costs that have been cranked into the management of companies has come as a result of the customer's demands on him for things which, in many cases, are not essential to the program, or the control of it. For instance, that one item I mentioned about committees of people from the defense customer coming out and going through the plant and wanting to get briefed on the particular project. They could be Budget people, Audit people, Management Analysis people - all sorts of groups going through a plant on a particular project.

The company feels because this is a representative of their customer, that their best man has to be turned loose to tell these guys what's going on. So, an engineer spends all day showing a bunch of people around - people who really don't have any direct responsibility for the program. That sort of thing takes time. Reports have to be written, which are highly questionable as far as industry is concerned.

So, when I make the last statement there about the company, if the management of the company is inefficient, it's generally because of the demands of the customer.

Generally I think it applies. You can find exceptions and so can I. But, as a general rule, I think it's true. There is, as I quoted Emory, a tendency on the part of the government to over-manage. In effect, after they've given a man a contract and the responsibility to produce a piece of hardware they get right down to the work-bench and tell him there how to do it, in order to protect themselves. This is understandable, but there has got to be some control placed on this or you begin to cripple the company. I mean, one inspector for every three employees is a pretty horrendous ratio.

MR. BARAN: Unfortunately our time has run out. Mr. Borklund, on behalf of Admiral Rose, the Faculty and the Student Body, I want to thank you for an informative lecture and an interesting discussion period.