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**A CINC's View of Defense Organization
Robert Herres**

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A CINC's View of Defense Organization

Robert T. Herres

Since giving this presentation, General Herres has been appointed Commander in Chief of the unified U.S. Space Command. He is also Commander in Chief of Aerospace Defense Command and its bilateral (U.S. and Canada) component, the North American Aerospace Defense Command, as well as Commander of the Air Force Space Command. He also recently served as Director for Command, Control, and Communications Systems in the Office of the Joint Chiefs of Staff. General Herres previously commanded the Air Force Communications Command, Eighth Air Force, and served as Chief of the Flight Crew Division with the Manned Orbiting Laboratory Program. He has held numerous posts in the fields of intelligence, communications, and systems development and acquisition.

I actually came to this command and control business involuntarily. I was a nonvolunteer starting, I guess, 11 years ago. I was a Wing Commander in Strategic Air Command (SAC), and got promoted to one star, and the CINC decided we needed a new Director for Command and Control. I seemed to have the right combination of credentials, so I was asked within about 24 hours after my orders were released to go to SAC headquarters and become Director of Command and Control there. And I've been deeply involved in the business ever since.

Aside from my joint experiences, another important dimension of my experience comes from the service department. I spent two years on the Air Staff as the Assistant Chief of Staff for Communications and Computer Resources. Later that job was reorganized under General Jones,* and became Director of Command and Control Communications System, under Lieutenant General Charles Gabriel, who's now the Chief of Staff.

*General David C. Jones, USAF, former Chairman of the Joint Chiefs of Staff.

I'd like to explain that a little bit. It's important for everybody to understand that there are two chains of command in our Department of Defense. Otherwise, there's no way you can understand command and control, no way you can understand how the Department of Defense is organized, and no way you can intelligently discuss issues relevant to possible JCS reorganization.

As Commander in Chief of Aerospace Defense Command (ADCOM), I am responsible through the JCS to the Secretary of Defense for the operational employment of forces associated with the strategic aerospace defense mission. Within that role and in that chain of command, I do not have resource management responsibility. I have nothing to do with research and development, or with training, equipping, organizing, and administering the forces that I would employ. However, as the commander of Air Force Space Command, a component of Aerospace Defense Command, I am responsible to the Secretary of the Air Force, through the Chief of Staff of the Air Force, and thence to the Secretary of Defense,

to train, equip, organize, and administer the resources and forces, the people, the money, the equipment, and so forth, that are used by Aerospace Defense Command to carry out appropriate aspects of the mission. I use my situation as an example. I have two completely distinct and separate chains of command. Thousands of people in the Pentagon and in Washington don't understand this. Even some people pontificating on how the JCS ought to be reorganized don't understand that important distinction.

The military departments do not have operational missions. The military departments have responsibility to train, equip, organize, and administer forces and resources that are provided to the unified and specified commanders for employment. Title 10 of the U.S. Code specifies that employment of U.S. armed forces shall be conducted under direction of the commanders of unified and specified commands. There are nine: six unified and three specified commands. The only difference between a unified and a specified command is that the forces in a specified command are predominantly from one service, and hence there is only one service component. Strategic Air Command, Military Airlift Command, and Aerospace Defense Command are the three specified commands, because their forces are all predominantly in the Air Force. This doesn't mean we don't have any Army or Navy people; it just means that almost all of our people are Air Force, and there is no standing Navy or Army component. There may be augmentees during crises or when certain operations plans are implemented, but the only standing component comes from one service.

Student: In your situation, where you're your own boss and in both chains of command, how does that help you, and what kind of things do you have to be careful of because you're in that situation?

Herres: A lot of things. You have to be very careful which chain of command you're using for which purpose — that is the cardinal rule. Of course it varies, depending on whether you're a unified or specified commander. A unified commander — well, it's not that clean, it depends on which unified command — but General Rogers,* for example, has to look almost equally to all three service departments for support. He has three separate components, and has to depend on his component commanders to provide resources — Army, Navy, and Air Force resources

— from CINC USAFE, from CINC USNAVEUR who has split headquarters in Naples and London, and from CINC USAREUR at Heidelberg. They're almost equally balanced. He must depend on those three four-stars to work through their departments to get resources so they'll be able to provide him with the forces. Each of them is dual-hatted also, because they have subordinate command responsibilities within that joint unified and specified chain of command.

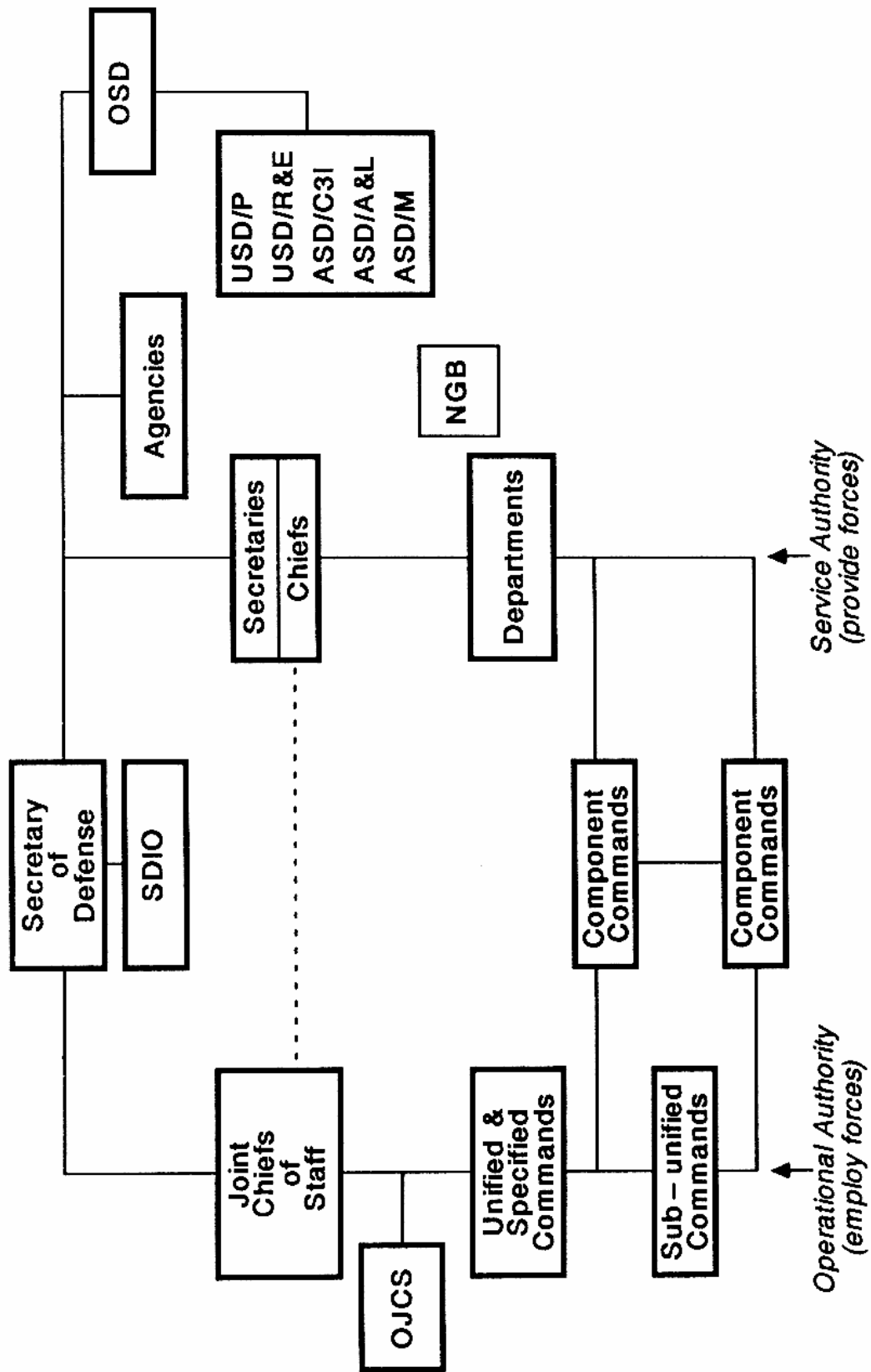
Let me just make sure this is clear. SECDEF is on top of the whole structure (figure 1). The law says that operational direction of the forces is to be done by the unified and specified commands, and as I said, there are nine of them: six unified, three specified. There are also subunified commands out there. For example, General Richard G. Stilwell* as Commander in Chief, U.S. Forces, Korea, was commander of a subunified command under CINC PAC. He also wore other hats. He was commander of the binational command in Korea (which has since changed its name to CFC, Combined Forces Command in Korea). Almost everybody in the system has two or three hats. I've got a third hat, too, the NORAD hat.

Now, in between, not by law, but by DOD directive,** is the JCS. The law only says that these unified and specified commanders report to the Secretary. But the DOD directive says they report through the JCS. It's not altogether clear exactly what that means. How do you report through a committee to your boss? That's one of the most delicate of the sensitivities. It's central to a lot of the issues surrounding the question of reorganization. In my case, it's less of a problem, because my particular mission is very time-sensitive, as I'm sure you can imagine, and there is a provision in the DOD directive that says that when time prevents the Chiefs from acting corporately as a conduit for this chain of command, the Chairman may act on their behalf. Obviously, if the United States is under attack and I'm assessing it from my perch out there in Cheyenne Mountain, and I've got to tell somebody, I go to the Chairman. The DOD directive is very clear about that. So for my

*See General Stilwell's presentation earlier in this volume.

**U.S. Department of Defense, Directive No. 5100.1, December 31, 1958, Section II(c).

*General Bernard W. Rogers, SACEUR.



DOD Chains of Command

Figure 1

really important operational missions, I don't have any problem figuring out who my boss is.

But it's a little bit tougher for long-range planning, which is not time-sensitive, and for resolving issues that stretch out for a time, one of which is before us right now: how to organize the unified space command. In that case, this delicacy does exist; it would be foolish for me to say it's not a problem. There are differing views among the Chiefs about how we should do certain things, and my recommendations will be reviewed by the JCS. I can't go to the Secretary and say, "Here's how we ought to organize this unified space command" — although I have every right to do that. It's my command, ADCOM, that's getting carved up, because much of the mission we carry out is part of the unified space command's envisioned mission. A lot of those missions will be transferred to the unified space command.

So one could say, logically, that everybody understands the President has made this decision, we're going to do this, and the commander who has those missions now ought to make recommendations to his boss on how that should be done. I made my recommendations to the JCS. They'll filter those. I hope I'll get a chance to appear before them and make my case on how I think all that ought to be done. There are some very delicate issues. What will happen when it goes to the Secretary, I don't know. I'll level with you. If it comes out differently from the way I think it should, and I feel strongly enough about it, I will have a tough decision to make: Should I go to the Secretary and say, "I think the Chiefs gave you a bad recommendation?" That's not going to be easy to do.

Student: How should it come out?

Herres: I knew somebody was going to ask that. I'll be glad to go into it a little later. What I'm covering now will make that explanation easier.

So the operational chain of command is for force employment. The unified and specified commanders plan for and conduct force employment. They may write requirements but they don't all do that. Sometimes they let their components write requirements and then smoke them up through the other chain of command. But requirements development is an

important aspect of the job. It is an important option that is available, but not well advertised.

Oettinger: It's a "may," not a "shall."

Herres: That's right. It turns out that not nearly so many requirements for systems are generated through that chain of command as one might think from studying the system and reading all the words that describe how it ought to work. In fact, it looks perfect if you look at it in a vacuum, outside the realities of how people actually function and work. But when you peel the onion back and see how many requirements actually get written by unified and specified commanders, and submitted to the JCS for validation, there aren't very many. For example, there is no documented requirement on the books for a system to shoot down an attacking ballistic missile, which may come as a great surprise to you given the Strategic Defense Initiative program. There's no documented requirement for a unique system for attacking cruise missiles. We have some generic requirements, of course. What's significant about that is not entirely clear. I'd like to understand that better myself. I'll tell you why it happens. What's significant about it may be a separate matter.

Let me get into the rest of the chain of command. On the other side there is the phenomenon called military departments. We have the secretaries, and we have the Chief of Staff, or in the case of the Navy and the Marine Corps, the CNO and the Commandant. Underneath them we have departmental commands, which vary from one service to another. This is where I fit in as Commander of Air Force Space Command. Not commander of the unified space command, because there isn't one yet. But I am commander of Air Force Space Command. Commodore Dick Truly, whom you may know from his activities as a space shuttle pilot, is the commander of Navy Space Command headquartered at Dahlgren, VA. It was formed about a year and a half ago. We are departmental commands, and we report through our respective chiefs of service, through the secretary of our service, to the Secretary of Defense. We don't report through any staffs. Out to one side of the departmental chain is the Office of the Secretary of Defense (OSD), with the OSD staff and all the assistant secretaries and under secretaries and so on. They help the Secretary supervise the Chiefs and the whole

operational chain of command. They do a lot more helping on the operational side than they do in the departmental chain of command. Now, out to the side of the JCS there's also a big body of folks called the Office of the Joint Chiefs of Staff (OJCS). They help on both sides, though more on the operational side.

There was a new twist in the office of the Secretary of Defense a few years ago, when the Under Secretary of Defense for Policy was established. You may know that there was a Blue Ribbon Committee when reorganization of OSD was contemplated. There was widespread feeling that we needed an Under Secretary to look after the operations side of the house because of all the shortcomings perceived there. We needed an Under Secretary because the Secretary was too busy trying to deal with Congress and the State Department and taking care of the outside part of the DOD. The upshot of that was to split the Under Secretary position into two parts: Policy, and Research and Engineering. Those were the two power centers in OSD, until very recently. Now, USD R&E has been virtually emasculated and it's a new ball game. It's not clear how that will come out.

It was quite some time after the Policy position was established before they got somebody to take it. There was a lot of nervousness about what exactly this guy was going to do, and so forth. There is a natural conflict and rivalry between the Under Secretary of Defense for Policy establishment and the JCS establishment, because there's a tendency for the Under Secretary to get into the operational end of the business while the OJCS and JCS tend to think it's their turf, for obvious reasons. They don't feel they need a bunch of civilians coming in for two, three, four years and telling them how to do their business. They'd just as soon do without all that help. That's how it is in bureaucracies. In the past the OSD tended to help the Secretary supervise the departmental chain of command more than the operational one, but there is a gradual trend in the other direction.

The recent reorganization (figure 2) may be one more big step in that trend. It may swing the balance even more. After all the changes were made, it appears that the USD Policy was not emasculated to nearly the extent that R&E was, and maybe Policy will become a more significant power scene. Time will tell. If that does happen, there will be natural bureaucratic competition, having nothing to do with

personalities; we've structured a system where these two, USD Policy and the JCS, just naturally conflict.

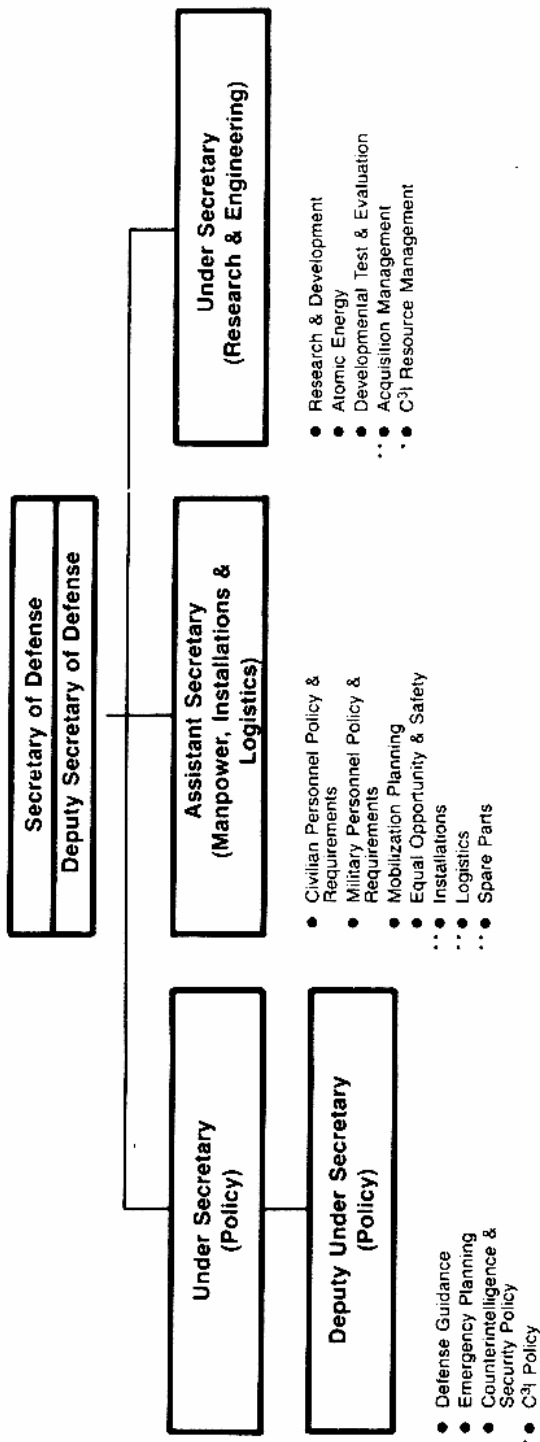
Oettinger: There's a third element, isn't there? The Assistant Secretary for C³ is now statutory, neither under Policy nor under R&E. He reports directly to the Secretary, so that's a third wild card element now.

Herres: That's right, and that's important because it was never done before. When Gerry Dinneen had that C³ job, he really wore three hats. As Assistant Secretary he reported directly to the Secretary, but he only did that in C³ matters that did not affect research and engineering. There's a lot of operations and maintenance (O&M) in the C³ world. For example, the Defense Communications Agency is as big as Western Union or AT&T, and somebody's got to supervise its O&M. In those roles, Dinneen reported directly to the Secretary as Assistant Secretary. But issues like JTIDS, C³ development, C³ versus C² issues, secure radio interoperability and so on were in the R&D world. When I use the term emasculated, that's one thing I'm referring to. As you can see from the chart (figure 2), that C³ area has been pulled out from under USD R&E, just as Jim Wade's* new role has also been pulled out from underneath R&E. So on the R&E side you've got a lot of fragmentation, and on the Policy side, only a little about C³ policy has been pulled out, so it's been left fairly intact. Time will tell whether that becomes a power center; if it does, it will still be in natural conflict with the OJCS.

McLaughlin: Two points. First, looking parallel across from where you have the JCS over the Service Chiefs (figure 1), and recognizing the fact that they are the same people, the structure continually raises the question as to whether their roles are distinct. Second, it strikes me that over the last few years, to the degree that the Under Secretary of Defense for Policy has been competing for operational influence, it frequently has been in support of the CINCs.

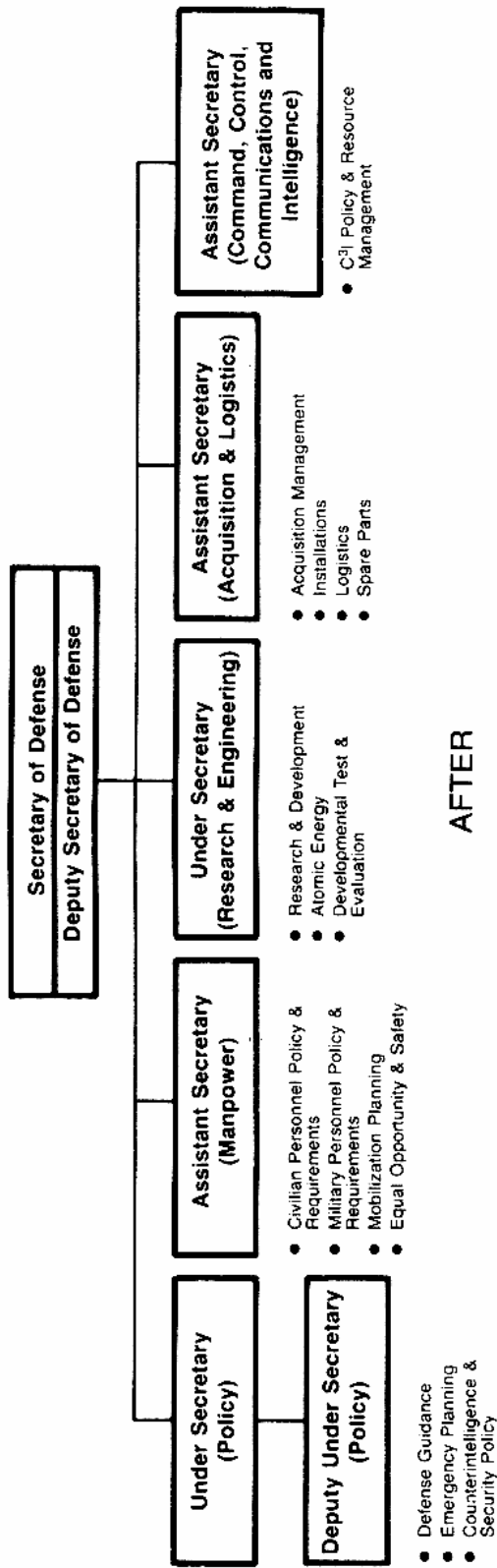
Herres: That's right, it goes both ways sometimes. I think that for my requirements in the aerospace defense world in general, going program by program, I've gotten better support from OSD than I have anyplace else in Washington. And when I say "I,"

*Dr. James P. Wade, Jr., Assistant Secretary of Defense for Acquisition and Logistics.



BEFORE

— Transfer to ASD (C³I)
 ••— Transfer to ASD (A&L)



AFTER

Figure 2. OSD Reorganization

I mean myself or my predecessor — the CINC institutionally. Some of our most vital programs, which were really at the cut point, are funded now because somebody in OSD stuffed them back in and the DRB went along with them. But the support I've gotten out of DRB has been very good. One area in which I've had a little problem is with getting more interceptors, but that's because they don't understand me, and I'm working on it.

Oettinger: Let me make a couple of statements and see how you react. One is that ever since 1947, there have been complaints about this structure or its predecessors. The structure has been pretty much the same since 1947, except for the 1958 amendments and a couple more recent ones. So to some who say that it's a matter of personalities and that the right chairman can make it work, so why mess around with the legislation, one would have to say that there are valid criticisms. The problems have got to be structural, because there have been enough different chairmen, enough different personalities that you cannot blame things on knaves, fools, or saints. The organization must have something to do with it. That argument, of course, tends to cut one way only; it's time to do something, after 40 years.

But there's another way of looking at this, which says that, as with so many organization charts in the private sector or in this university or anyplace else, it simply doesn't matter. The end reality has nothing to do with the formal organization. One clue to that idea is what you described in your several hats. For example, look at the Korea command and the multiple hats everybody is wearing. One guy sits in 16 slots, and so therefore could play any one of the hats and pick whichever place he is in at any given moment. In the same way, I, being in two different schools, can go to two different deans or to no dean. And I love being in an ambiguous position because it means that nobody controls me as much as if I were only under one. A guy like you or your counterparts — CINC PAC or whoever — wears enough different hats that he has total flexibility and it could in fact be a disaster if things were rewired.

These two points of view lead to very different conclusions about the nature of the problem, or how to address it.

Herres: The realities are that you don't really have all that flexibility. Those of us who are dual-, triple-, or multiple-hatted have very specific respon-

sibilities for each of those various chains of command. We live by mission statements. One of the rigors of military organization is the mission statement. That's what we're hung up on right now with the unified space command. What exactly is the mission statement going to be? It's one thing for the President to say there will be such a command — and that's really all he said in his letter, it's only that long. And all the Secretary added was one more sentence that says let's do it by 1 October 1985. Now the Chiefs are trying to figure out what they are going to put in a document, required by law, called the Unified Command Plan. This must be reviewed by the President, and only the President can approve it. It has to be reviewed every two years. What are we going to put in there exactly about this unified command for space?

We live by mission statements in the components and the departmental commands and departments. We forget sometimes what those statements are, but we get our comeuppance when we go through the wrong chain of command for the wrong issue and the wrong question. You see, for operational issues, I can go to the Chief, but I'm really going off-line a bit. For resource management issues, I'm going off-line by going to him separately. He's a member of the Joint Chiefs of Staff, so it's okay for me to go to him, but I shouldn't go to him outside of that context, which means I really ought to go to all the Chiefs, corporately, not just to him. All you've got to do is send a message to the wrong headquarters on the wrong issue and you find out quickly that you don't have total flexibility.

I learned about these two chains of command when I was a new BG working for General Meyer, who was then Commander in Chief of SAC. I worked with him on both because in the Directorate of Command and Control we were plugged in tightly to the Worldwide Military Command and Control System (WWMCCS) in direct connection with the JCS, especially because of the very tight control of nuclear forces that was required, but I also worked with the Air Staff because they were providing resources. Believe me, I didn't understand it as well then as I needed to, but I learned very quickly that you have to be careful which chain of command you use for which issue. It's just not like a multiple path network where you can take what looks like the path of least resistance. The resistance may be very strong, yet it may be in the only path available to you. Now, to

your other point. I don't know how much you want to get into ideas about JCS reorganization, but there is a lot of criticism. The criticism invariably comes from people who have left, almost never from people within the system. It is interesting how many people are critical of the system after they leave.

McLaughlin: Doesn't that simply say that criticism of the structure is injurious to one's career?

Herres: Let's just say that your perspective changes. And that may be influenced by what's healthy and what's not, though not necessarily. For example, nobody is going to do anything to General Vessey's career, he's above that now. He's been a great Chairman, highly respected by everyone in Washington. I think the President holds him in high esteem. So General Vessey has no reason to say, "Well, I think the system is fine the way it is," simply because he's worried about somebody messing up his career. Maybe there's a sense of loyalty to the Secretary and the President. Maybe it's a feeling that if we mess around with the system we're going to do more harm than good. I don't know. My point is, I believe that General Vessey honestly thinks the system is okay as is and we just need to make it work.

I'm not defending that position, I'm just making the point that not everybody feels the system has to be changed. And it's not just the Chairman who feels impervious to pressure one way or the other, saying that things are fine as they are, that we don't need to restructure ourselves. Any CINC gets to the point where he knows he's not going to get any more jobs because there aren't any more jobs left. He's going to do that job to complete his duty in the Air Force, and when 35 years comes he'll retire, because that's how we do it in the Air Force, whether one wants to or not (and almost no one wants to). And one Secretary after another consistently enforces that rule. So nobody's going to fire you because you say the system could stand some improvement. Nobody would dare fire you. The political reaction would be too much for anybody to handle. So it's not entirely based on that.

But you're right, there are also a lot of people who don't criticize the system for the very reason that you stated.

Student: I have a question about some internal aspects of the Air Force. Is any part of your mission assigned to reserve components, Air Guard or Air Reserves, and do you see any internecine warfare

within the Air Force over the handling of that mission, in terms of weapons acquisition or missions?

Herres: First of all, no, I do not see that kind of serious conflict within the Air Force. As to the first part of your question, yes, a lot of my mission is assigned to reserve components. As CINC NORAD with the whole North American mission, I've got 18 interceptor squadrons dedicated to that mission, plus 2 more that would come out of dedicated training assets, so we have the equivalent of 20 squadrons. Eleven of those are Air National Guard squadrons, and they're very good. They are as good as any active duty unit; all the Air Guard units are. As a matter of fact, at our last William Tell Competition — held every two years at Tyndall AFB, FL — the Guard, with F-4s, came one missile shot away from winning the competition over the F-15, a far superior aircraft that is only in the active duty force. Air Guard units have won the competition a number of times.

There are differences of opinion in the Guard about what new systems they ought to get. Sometimes the Guard end-runs the Air Force and goes to the Congress. They did that on the C-130H acquisition. It turned out that that was too far out of joint, but they did end-run the Air Force and use political influence, and Congress authorized some more C-130Hs whether the Guard needed them or not.

The administration of the Guard is an interesting organizational problem, because under the Secretary you've got the National Guard Bureau and underneath that you've got the Air National Guard and the Army Guard. That's it. The Navy doesn't have a guard, but it has a reserve structure. So the Air National Guard Chief in the Air Force is under the National Guard Bureau Head. But he knows who his real boss is, and nobody minds that it's the Chief of Staff of the Air Force. He comes to the Chief's staff meeting every morning. He used to sit right next to me when I was on the Air Staff, as did the Chief of the Air Force Reserve. He worked very closely with us, because the Air National Guard is nothing without the Air Force, and the Air Force is not much without the Guard. We depend very heavily on the Guard and the Reserve Force.

Right now there's a question at issue. Some people in the Guard would prefer not to have F-16s to replace their interceptors. They would like to get — well, F-20 may end up being the solution, but

that's not being stimulated by the Guard. It's being stimulated by Thomas V. Jones, the Chairman of Northrop. But there are, for example, some guys who want the F-4 interceptor. Now, we don't want to do that, it doesn't make much sense.

Student: Do you see that skewing your C²? If they're politically influential enough to get the F-20, and you've got another aircraft destined for NORAD, that problem may be intractable.

Herres: If I wanted to weigh in on the F-20 issue, I would have to go to the Commander of the Tactical Air Command, who is responsible for my component carrying out the air-breathing air defense mission. And if he thought that the decision was wrong, he would exercise his prerogative to go to the Secretary and say, "I don't think we should do it."

Actually, if the F-20 turns out to be the choice, I'm not going to have heartburn. Its fire control system is probably better than that of the F-16; it doesn't have as good a range but maybe we can put a drag tank on the airplane and make it perform as well. But this is no different from differences within the Air Force about what system we ought to buy for one thing or another. I'm about ready to invite Lockheed to give me a briefing on the P-3 warning and patrol proposal they've been making on an international basis. We can't afford any more E-3s, so we need a lower-cost alternative. I'll probably upset a lot of people by asking for that. It's a Navy airplane, but it will probably do well for coastal patrol, surveillance against cruise missiles, and we could probably get it a lot cheaper than the E-3, so we ought to look at it. We'll fight it all out, and something will come out at the end. Our system does that pretty well, though it doesn't always come out with the right answer.

Let me emphasize that the departmental commands are linked to the joint unified and specified command structure, the nine unified and specified CINCs, because many of these departmental commands are component commands with people dual-hatted as component commanders of these unified and specified commands. Remember the example of the U.S. forces in Europe? There's an Army component, a Navy component, and an Air Force component. There are department commands within this operational chain of command. Many have international hats, as we suggested. Let me give you a classic example, just like mine, of a triple-hatted com-

mander — CINC LANT (figure 3). CINC LANT is SACLANT, his international hat, responsible to the NATO command structure. He is also CINC LANT, responsible to SECDEF through the JCS. Finally, he is CINC LANTFLT, a departmental command, and he's responsible through the CNO to Secretary Lehman. So he's triple-hatted, but think of it this way. LANTFLT is the U.S. Navy component of LANTCOM. LANTCOM is the U.S. component of SACLANT. Similarly, in Europe, there is a U.S. Army Europe. But General Rogers is not commander of it; there's a separate commander, General Otis, who's CINC USAREUR. USAREUR is the U.S. Army component of EUCOM, which is the U.S. component of SACEUR.

Now, I'm commander of Air Force Space Command, a U.S. component of ADCOM, which is a component of a binational command I haven't told you much about, the North American Aerospace Defense Command (NORAD). With that hat on I am also responsible to the Canadian government, through the Chief of Defense Staff in Ottawa, then through the Ministry of Defense, to the Prime Minister of Canada. So I wear an international hat the same as SACLANT and SACEUR. But there is a logical pattern in this system that is defined by the Unified Command Plan and JCS Pub 2.*

Student: This may all work fine in peacetime, but what happens in war?

Herres: It's designed to work like that in war, too.

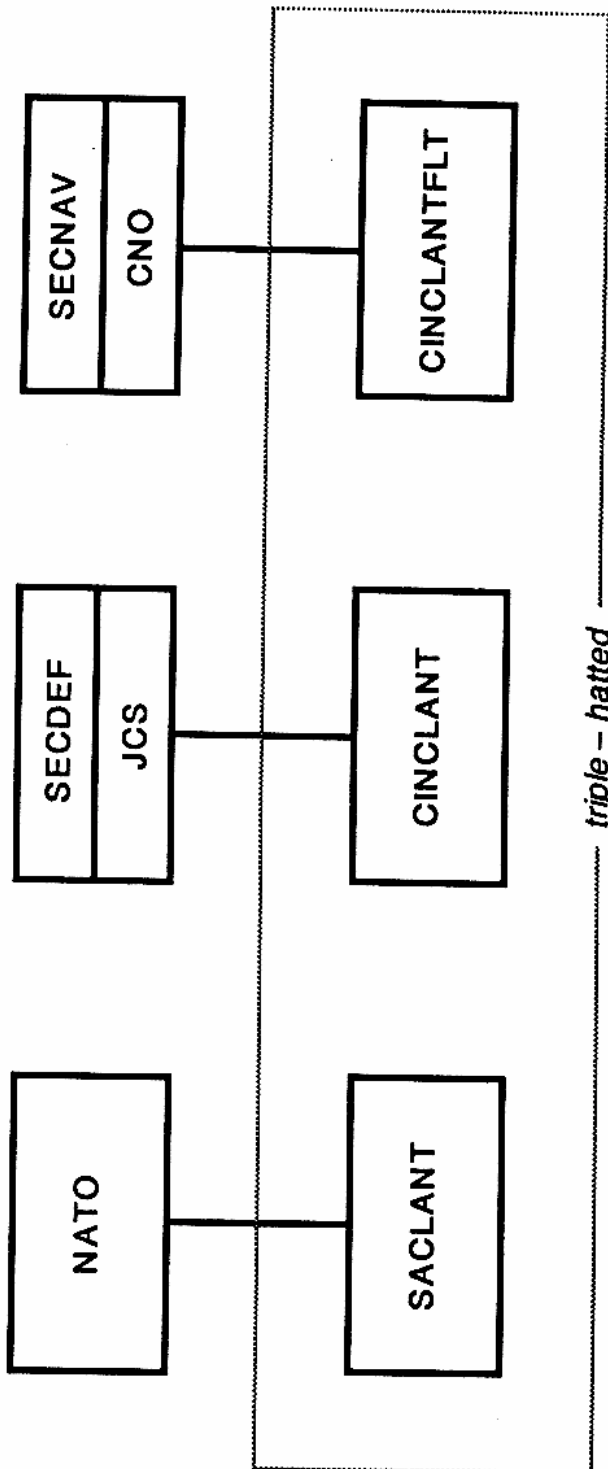
Student: Who's going to be in command?

Herres: That depends on the mission. If the mission involves the operation of U.S. forces in the Atlantic Ocean, CINC LANT would be in command. If it's a NATO action, and all the NATO nations have agreed to be involved, then he wears his SACLANT hat. He's responsible for the U.S. commitment to the SACLANT mission.

Student: How clear is it when SACLANT would supersede CINC LANT, and when SACEUR would supersede CINC EUR?

Herres: It depends — he'll get his marching orders on that. If there's any question, he'll get guidance from the Chiefs, or from the Secretary through the Chiefs. Usually it will be self-evident. Fortunately,

*Joint Chiefs of Staff. *Unified Action Armed Forces, UNAAF. JCS Publication 2.* Washington, D.C., Government Printing Office, 1974.



CINCLANT Example
Figure 3

we haven't had those situations. We've had the reverse situations where the international organization of which our U.S. component is a part has chosen not to be involved. To give you a good example, Lebanon was CINC EUR's responsibility. The CINC USNAVEUR was the component commander with most responsibility there, but it was outside NATO's area of interest. NATO was not involved, but EUCOM was, so it was a unilateral U.S. action. So LANTCOM, as the U.S. unified command, gives us an instrument for employing forces in which the U.S. is unilaterally involved.

A key example of that is the Cuban missile crisis, in which my command was deeply involved. I was not in command then, of course, but during that crisis, interceptor forces were deployed to Florida from ADCOM. This had to be done as a U.S. unilateral action outside the purview of NORAD, because the Canadians didn't want to get involved. That presented complications, too. Because our regional boundaries crossed the border, some NORAD regions were part Canadian and part U.S. But it wasn't a big problem that the staffs were intermixed; the Canadian military people just stepped back, and we filled in with U.S. people for that action.

It's getting more difficult to avoid that problem, though, because people are becoming more integrated with the systems that support them and vice versa. Today if I, as CINC AD, were obliged to carry out a unilateral U.S. action, I'd have a harder time disconnecting from NORAD. It's a tough problem. The Navy has been able to handle it a bit more cleanly, although that has cost them something, because the SACLANT staff, at Norfolk, is in a separate building next door to the CINC LANT staff. Now CINC LANT and CINC LANTFLT staffs completely overlap. You can't avoid that, because there's not enough resources to do it any other way. But there is that division.

We're not structured that way in Colorado Springs. There's some feeling that when we create the unified space command, we ought to make this separation between the U.S. and the international components more distinct. Whether we do depends a lot on how the Canadians want to operate. If the Trudeau government had stayed in power, we probably would have had to do that. But the current government has shown more enthusiasm for the mission and Prime Minister Mulroney has stated publicly that he supports the Strategic Defense Initiative research, so we

may not have a big problem. But you raised a good point.

Student: A number of times you've said things like, "If I want to weigh in on the F-20," or, "If I have to do this." It seems there's a strong ingredient of how you as an individual judge things rather than "My mission says that I must do this." For example, concerning whether the power center will shift in the C³I sense, you said, "Well, time will tell." The mission statements and the organizational relationships are known. It's the people and how they react that are not known. And yet you have said it's not personality-dependent.

Herres: Let me explain that a little more. I didn't mean the power center might shift in the C³I sense. I meant from an organizational management standpoint, in the relationship between the parts of the structure around C³I as an office. In the past you had USD Policy, and USD R&E. We still have this structure, but we've added some assistant secretaries. There's one for C³I who used to be under R&E, and another for acquisition and logistics. Most of the powers in these assistant secretaries' offices came from R&E, very few came from Policy. This puts the USD Policy in a position of greater influence, which is going to give him incentives to weigh in even more heavily than he has in the past on operational issues. Policy issues and operational issues have a tendency to become more intertwined than research and engineering issues, although the operational end of the structure gets involved here on prioritization, requirements validations, and structures. So there is a relationship. What I'm saying is that there's bound to be a slight shift in the balance between these two Under Secretaries. You simply don't go into a bureaucracy and move responsibilities around without this happening. That's bureaucratic rule #1: There are no power vacuums.

Personalities do matter, no question about it — the strengths of those personalities and the talents of the individuals and how much they want to weigh in on the issues. But I was responding to the suggestion that if you got enough of this interconnecting, dual and triple hatting, with people as components who are also in this departmental chain of command, then you're not really encumbered by the structure because you can just pick and follow whatever path you want. I'm suggesting that you don't have total flexibility. I don't deny personalities can play varying roles in a mission, but there are limits inherent in the command

structure. I was talking in the context of the commander's view, not the civilian staff's. The missions and responsibilities of staffs are more loosely defined, especially regarding the C³I agency. Everybody in the Pentagon has his fingers in C³I one way or another. Don Latham* is bigger now than he ever was, but he still is going to get help from elsewhere. If the new USD R&E is a strong personality, he's still going to have influence over the research and engineering end of the business. There's going to be a lot of interplay between the staffs of C³I and R&E, just as there will between C³I and Policy. And the JCS will also be influencing C³I, because of the need for greater jointness and interoperability in the C³I business, more than in any other facet of the defense business. Almost all C³ systems of importance are joint systems, although when you get down to lower levels in the field they're not.

So yes, in that sense the people will help define the power relationships, as these various staffs all compete for some input into C³I decisions.

Oettinger: Coming back to my question about relative flexibility and rigidity, we keep gravitating toward the top of your command structure diagram, and I've been meaning to ask a question since you drew that component box at the bottom. Let's say the commanding officer or exec officer of some ship in the Atlantic fouls something up or commits a crime at sea or fails to behave in combat as he should. Presumably, the way the law is written, his discipline or court martial would be under the department.

Herres: That's right.

Oettinger: Certainly in your situation you've got both hats, so you could do it as the component commander, though the CINC who was truly in a unified command might not. Again, how much concentration is there? How much real split is there between the combined or joint role and the departmental command when there is multi-hatting? Or is your answer the same as before, that disciplinary action against that officer, no matter how you slice it, would have to come from the bureaucracy of the departmental command?

Herres: Yes, it would be exercised from that side, because as you point out, those laws are administered down through the military departments. But you touch on a very interesting grey area involving mat-

ters of that kind. That ship captain is responsible through a chain of command that is all within the department, a component of the department. As far as he's concerned, the chain of command is basically the same until it hits the unified command level, where it splits. If it's an operational matter, it goes up the operational chain of command to the JCS. But he only sees the intermediate commanders, he doesn't see the unified commander. The only guys who see that unified commander are the component commanders. So it never becomes a question or an issue. Now, if he's got a subordinate who doesn't respond to direction from the CINC side, then theoretically he's being insubordinate by not forcing compliance. So how to handle those kinds of disciplinary matters is a good question.

Oettinger: No reform of any kind will ever fully solve that. It's like the matrix organization problem in the civilian world. You know, the carpenter's doing the job for me and I'm the project manager, but if the chief of carpenters doesn't agree with me that it was the carpentry that got botched, then either I drop the matter, or I go argue with the chief executive officer.

Herres: The first thing you have to understand about this business is why we do that. Wouldn't it be simpler, cheaper, and more straightforward if you just organized around the missions and combined military departments in unified commands so that we don't have this duality? The reason is that people in this country have never wanted a strong military, we have wanted to fragment military authority. After World War II the Congress and the people, through the 1947 National Security Act, and then the Amendments in 1958,* made certain we had a good, manageable, unified structure, while leaving just enough fragmentation in the system to ensure political control over the military establishment. That way we could never have a military establishment that would be too strong. If that's your ground rule, I challenge you to find an improvement to this system that amounts to anything more than a tweak here and there. Some may be major tweaks, but the basic structure, the duality of responsibility, up to the level

*See *National Security Act of 1947*, P.L. 80-253, Stat. 61, July 26, 1947, as amended by the *Reorganization Act of 1949*, P.L. 81-216, August 10, 1949; the *President's Reorganization Plan No. 6*, April 30, 1953; and the *Defense Department Reorganization Act of 1958*, P.L. 85-599, Stat. 72, August, 6, 1958.

Available in U.S. Department of Defense, *Documents on Establishment and Organization*.

*Donald C. Latham, Assistant Secretary of Defense (C³I). See Mr. Latham's presentation earlier in this volume.

of political leadership, is built into this system. This system even has some political leadership in the service departments, and very tight political leadership control here in the JCS. The JCS Chairmen are appointed for two-year terms, and they can leave in a hurry. JCS terms don't have to be renewed. The Chairman must be confirmed by the Congress every two years, as well as nominated by the President.

In other words, there are a lot of checks and balances in this system. You could improve it here and there, but it is essential to unify the diversity of resources necessary to carry out military missions: naval resources, air resources, and land-based resources. The system combines the best of resource management, which is what this departmental chain of command is all about. Resource management — training, equipping, organizing, and administering — is done by types of systems: naval, air, and land. But we employ them jointly because we no longer live in a world in which you can employ them separately. Hence the unified commands. We try to weave them together. I submit to you that the system works a lot better than it gets credit for. And with every generation of people that comes along (a generation being about a four-year turnover of senior leadership), the system works better.

I think things could be done to make it better still, but I'm not sure that the recommendations being bandied about now are that great. The CSIS study* I think is good. It's been criticized, but I think the study as a whole has made some fairly decent suggestions for tweaking the system without doing very much violence. We could probably live with it. The worst that could happen with the CSIS study would be to do it piecemeal, pick and choose. Those recommendations, in my view, hang together, and if we're not going to do them all, we shouldn't do any of them. Whatever's done should be comprehensive.

Student: I wonder if you could illustrate how the organization works by explaining where the impetus came from for the rather remarkable, though certainly not unexpected, improvement in strategic C³. These programs have blossomed over the last two or three years.

Herres: Well, for starters, the President said we really have to do something about this. At first a lot of people didn't pay attention, but since then it's come

from a lot of different directions. I've got to give Don Latham a lot of credit. Here's a case where personalities matter. Don's a strong personality, and he works very hard. He came into that job like a velocity vector with a lot of thrust, bent on going in one direction, and that direction was to make some significant improvements, which he did. We've got a good team in the Pentagon, and we had some support from the services. They were beginning to realize that we've just got to support those programs. There certainly was outside criticism, too; that probably got everybody's attention. The General Accounting Office (GAO) had taken a good, hard look at this business. General Ellis* stimulated, you recall, the infamous so-called connectivity study. It started as just an ADCOM-SAC study, then bubbled up into a DOD-wide study. A lot of the initiatives that Gerry Dinneen got going stuck. I think there was better continuity in philosophy, trend, and general direction in the C³ world from the previous administration to the current one than in any other functional area.

Oettinger: One difference about the C³ area is that it was five or six years ago when a number of folks started saying, "Hey, this is a problem." And so in the Carter administration the pieces got thought through and put into place and the studies made, but the thing had not been tainted yet by any overt action. Thus, the new administration could put its stamp on all that. Whereas in the MX and B-1 areas, not only were there studies but the political stamp had been put on them already. They couldn't come forth as cleanly as C³I did.

Herres: You put your finger on it very neatly. There weren't any glamorous things to hook onto and make an issue of. Almost all the success stories we're pursuing now were initiated in the previous administration, and some in the administration before that. I don't know of any big thing we've got going now that wasn't pushed hard before.

Oettinger: Well, there is more money.

Herres: It's a question of degree. Before, we only had two Pave Paws radars and that was all we were going to get. Now we've got three more under construction, and we never could have pulled that off in the previous administration because there wasn't enough money. So there may be a degree of emphasis by this administration, in terms of percentage of the budget. The DOD C³ budget went up not quite 1

* *Toward a More Effective Defense: The Final Report of the CSIS Defense Organization Project.* Washington, D.C.: The Center for Strategic and International Studies, Georgetown University, February 1985.

* General Richard Ellis, Former CINC SAC.

percent. Don Latham could give you a different figure; it depends on how you calculate it. But 1 percent is a lot when you're talking about 5 versus 6 percent of \$300 billion, because the total went up, too.

Let me say a couple words about C³. Actually, I think C³ is a bad term. We ought to say command and control, C². There is a very good definition for command and control in JCS Pub. 1.* Basically it says that command and control is a process by which a commander directs and controls his forces. And command and control systems are those communications, data automation systems, people, procedures, and structures a commander uses to exercise direction and control over his forces to carry out his mission.

If you don't remember anything else I've said today, remember two things: first, there's this important dual chain of command structure, and second, command and control is a process. That is a fact, and I've been in this business a long time. I'm in the most C²-intensive job in the DOD right now; and I can tell you C² is a process. Don't let anybody tell you different.

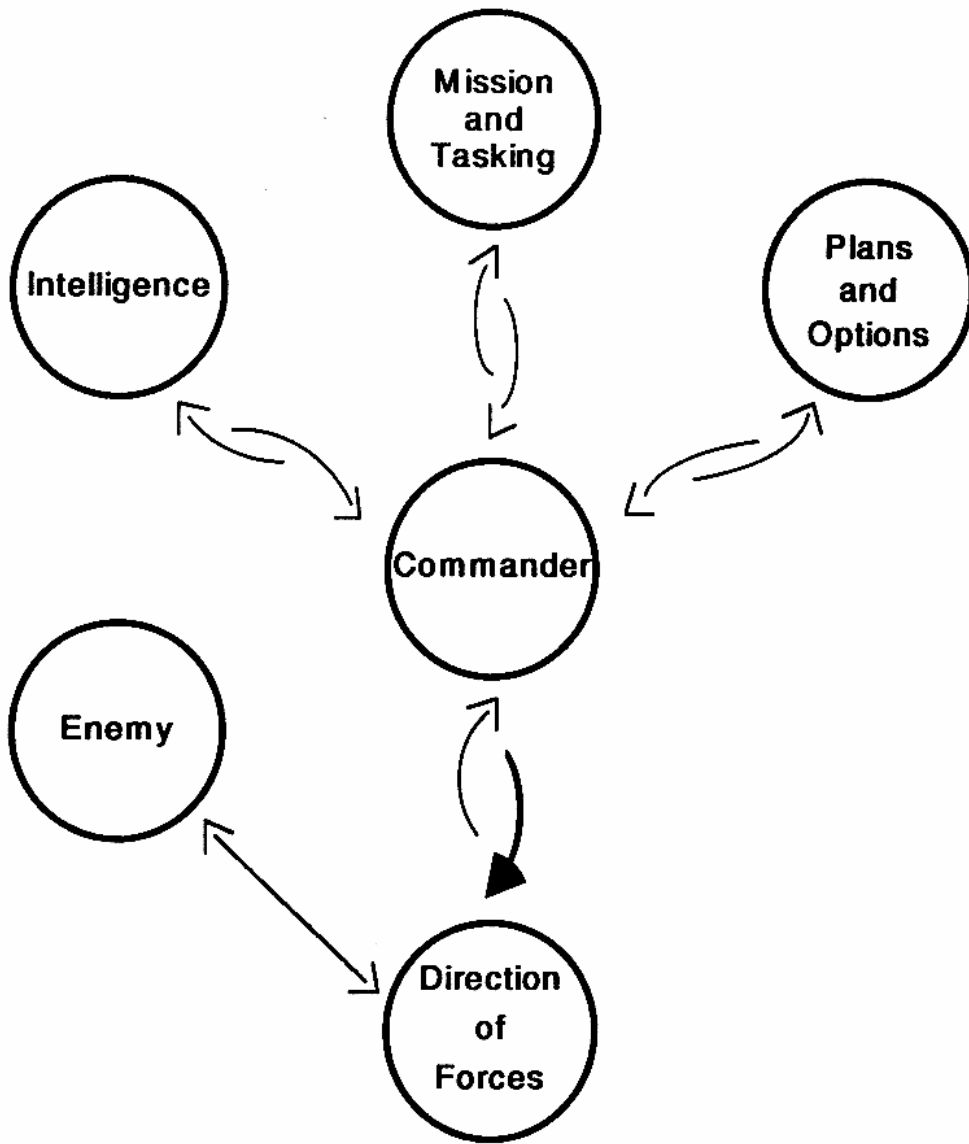
The systems that carry out this process include people and procedures, and at the top there is a commander. By definition, it's a process by which the commander carries out direction and control of his forces. When Alexander stood on top of a hill, maybe in his chariot, and hollered to his troops, "That company over there move ahead 100 yards, and that company over there move sideways 50 yards, and that company charge," or whatever he told them, he was using a command and control system. He may have communicated with runners, he may have used flag signals, he may have just hollered at them. He was standing on a hill because he could see better, and he was using his eyeballs for sensors. He was probably listening, because you can tell a lot by what you hear. If one company is hollering a little louder than another, then it's bound to mean something to an experienced field commander. He puts all that together in his mind, he makes decisions, and he gives direction to control his forces. He gets feedback by watching what's going on, what the enemy's doing, what his forces are doing, and how they're progressing as they engage.

We don't do anything differently today. We use better sensors, more sophisticated processors, and our commanders use communication systems to get that information out to or back from their forces on what's going on. It's still a process, and in principle that process is unchanged and never will change. It's transferable to the business world and to all kinds of worlds; all you have to do is make your own analogous transpositions. It's extremely important to understand that, because only a dummy tries to build a command and control system without thinking all that through. There is no such thing as a single command and control system. There are systems of systems, and there are parts of systems and components of systems, but I don't know of any truly single system.

There is a thing called the Worldwide Military Command and Control System. I have defied a number of people to define that. I was responsible for helping the Chairman execute his responsibilities as manager of that worldwide command and control system. I was czar of that system for 20 months. I can tell you that defining it is very, very difficult. Boxes need to be drawn around some of the systems and subsystems so that they can be defined. I tried very hard to get as much of that done as I could when I was on the Joint Staff. It was really hard to get people oriented toward that kind of thinking. But you can't build systems unless you define what they're going to do.

Now when I define a command and control system, I put a little circle and I write "commander" (figure 4). The reason we have command and control systems is to provide direction to the forces. If you don't do that there's no point in having one, because this is what it's all about. Then there's a fellow called the enemy. If you go to war you engage the enemy, so there's a mechanical linkage here between the forces and the enemy. You send direction out to the forces and tell them to engage, but you don't do that in a vacuum. First you had to have some intelligence information, otherwise you wouldn't have known whom to tell to engage what or where or why. You also had to have a mission, because that's part of the definition. It's a process to direct and control the forces to carry out the commander's mission. Now, implicit here is tasking. Because you have a mission, that's your prearranged tasking. I've got a mission, the defense of North America, as CINC NORAD. I don't need a lot of tasking to tell

*Joint Chiefs of Staff. *U.S. Department of Defense Dictionary of Military and Associated Terms*, JCS Publication 1. Washington, D.C.: Government Printing Office, 1979.



Command and Control System
Figure 4

me that if the Soviets start flying bombers and cruise missiles at us, I go out there and engage them. I warn and I do certain other things embedded in my mission. But there are also times when the mission gets modified, or guidance is provided within that mission, and that's tasking. Still, the Chairman's got to have his marching orders; he gets them from the SECDEF and the President. Each of the unified and specified commanders gets marching orders.

Intelligence information and tasking come together to help the commander decide what he's going to do. Sometimes what you're going to do with the forces gets so complicated that you don't have time to analyze very quickly and describe what you want to do and build plans and get them in the field. So good military people plan ahead.

All planning is a sort of what-if game. Let's pretend that the Soviets attack Iran. They come across the border and take over Iran. What are we going to do about that? What do you think the President will want us to do? That's part of the what-if scenario. Suppose the President says, "Don't let them take Teheran. Hold the Soviets outside of Teheran. Prevent that from happening." So we pretend that's something we might get tasked to do. And you think through all the things associated with being able to carry out that tasking. How many forces do you have to put there? You do a lot of what-if on the intelligence side: What do you think the Soviets are really going to do? How many tanks are there going to be? How many airplanes are there going to be? And so forth. You put all that together, and you put those plans on the shelf. While you're doing that you build up expertise in your plans shop about what it takes to get your thoughts organized in advance, so that when the Soviets come across the border it's not chaos, running around trying to figure out who you're going to send where to do what.

Plans, even though you may never use them, help organize your thinking in advance. They develop options that you may not formalize in terms of structured operations plans, but that you have available for the commander to consider when contingencies occur.

Then you get tasking and decide what you're going to tell the forces. The forces engage the enemy. Intelligence reports on what the enemy does and how they react before and after engagement. You have tactical sensors that do that, and of course the other

intelligence sources. You have field reports that come from the troops out there involved in the engagement process. Fighter pilots come back and say, "I just shot down five airplanes," and we say, "We don't believe that. You probably only shot down three, but we'll mark you up for four and split the difference." Then you try to track how many airplanes they have left. You need to know what the enemy's force status is. You also need to know what your own force status is. That's very important and often overlooked as a key part of the command and control process. Sometimes it's harder than collecting intelligence on the enemy. It's frustrating when you can't find out the conditions of your own forces. There are a lot of reasons for that which I won't go into.

But force status reporting is a dynamic process, because if you engage, you take losses, you redispense your forces, and that creates change all the time. And of course intelligence is dynamic. Mission and tasking are originally static, but as things go on you start running out of operations plans. So you send a guy down the hall to the planners and say, "Hey, take a look at this option, see what it would take to implement that and come back to me with a quick plan — I need it in two hours." This goes on at the Pentagon all the time, believe me. Even for things that you never hear about, things that never happened but that somebody thinks might occur. So plans and options are a dynamic process, too, because there's a little inner circle here: What if I want to do X? I don't know a better way to describe that piece of the process. This is what command and control is all about, these dynamic little circles spinning around.

Now, the other thing you must understand is that this process is happening at the CINC level, it's happening at the component level, it's happening to numbered air forces, it's happening to task groups at sea, and it's happening to a battalion commander, or a brigade commander, depending on the mission. They all have that process going on within their organizations. It's like a three-dimensional chess game going on all the time. You've got systems of systems in there making all this happen. I'll leave you with one thought. You can build a lot of sophisticated jazz in all these areas I've marked with lines and arrows, but in this day and age none of it matters if these lines don't work. And what are these lines? What is the system? Communications.

I was not born a communicator; I was commander of Air Force Communications Command because I

fell into this business as a nonvolunteer. I started out as a fighter pilot, and that's what I wanted to be in the Air Force. But I learned to respect the need for good communications, and I've learned it more every day and every minute. Sometimes that planning staff is scattered all over the place. And if those lines don't work, you forget the whole thing. Especially force direction and lines of communication to your forces. But that's not the only one — if you're cut off from your intelligence, if you're cut off from your tasking or your planning staff, you're out of business. If you're going to build sophisticated systems, start with communications. You can use orange crates and toilet paper and grease pencil for the rest of it, and still function, even though it may be tough; but if you don't have the communications, you might as well get out a deck of cards and start playing bridge because that's all you're going to be good for.

Student: If I project you as that commander, and you have operational control of forces that exist today, with systems and procedures, and then I look at General Abrahamson* as the programming person for strategic defense, how do you two relate?

Herres: General Abrahamson is managing the research of technologies to provide systems that we will employ here in the unified space command in the future if the technologies prove such that it's economically and technically feasible to do so.

Student: He's directly under the Secretary of Defense?

Herres: That's right. He's really on the service side of the house. They just happened to have plugged him in under the President and Secretary of Defense. But he's collating and coordinating all the work that's going on down here in the services. Research and development is a military department responsibility. There are research and development components of the departmental commands that support components providing forces to the unified and specified commands. There's no research and development management on the operational command side other than the definition of requirements.

Student: If it weren't for the President's political decision, would Abrahamson's role have been more directly under USD R&E?

Herres: Exactly. I think of Jim Abrahamson as a

super DARPA.* I think that's the best way to think of him. He and I have discussed this SDIO, and how we should elaborate it. We feel it's very important for us all to be reading from the same sheet of music. We're not all doing that as well as we should, but it's getting better.

Have you seen the white paper the White House put out on strategic defensive issues early this year? It's very good. If somebody had written it a year ago and we'd read it, we'd have been a lot better off. But I think of Jim as a super DARPA. DARPA's mission is to research technologies for all our military and national security needs. When the Secretary created Jim Abrahamson's office, he said, "We need special emphasis on strategic defense to implement the President's decision, so I'm going to pull that out of DARPA and create a separate office. Besides that, we're going to build a fence around the money associated with all the relevant programs in these departments — which is usually not done in DARPA programs — and we'll put more money inside that fence." That's basically what the President said.

Jim has no operational role, but he influences what we'll be able to do someday because he influences the technology that later will produce the systems. Keep in mind that he's not developing systems and he's not programming. Programming will be done in the military departments, unless there's a gigantic change of heart among all those people in that bureaucracy. They're not going to give that up very easily. The programming of research will be done in the SDIO, but the programming of the systems will be done in the departments. And employment will be done in the unified and specified commands, which leads back to the subject of the unified space command. I'll give you my recommendation on how the unified space command ought to be structured.

As I said, I've got three hats — NORAD, ADCOM, and Air Force Space Command — which are, respectively, a binational command; a specified command, through the JCS to the Secretary; and an Air Force Component Command, the component of ADCOM for missile warning and space surveillance. ADCOM has another component; ADCOM is the only specified command that has more than one component. As a matter of fact, there are really two other components. There is an organization called ADTAC, Air Defense Tactical Air Command, under the Com-

*Lt. General James A. Abrahamson, USAF, Director, Strategic Defense Initiative Organization (SDIO).

*Defense Advanced Research Projects Agency.

mander of Tactical Air Command. It has resource management for all the air-breathing air defense assets that support our mission. They are dedicated assets. The Air National Guard Units gained by the Air Force and dedicated to the air defense mission are gained by ADTAC and are under my operational control. So these are components of ADTAC, which is a component of ADCOM. There's also another ADCOM component. The Alaskan NORAD Region is one of my six NORAD regions. It's responsible for the air defense of Alaska. So the commander of Alaskan Air Command has dual hats as one of my NORAD Region commanders, and Alaskan Air Command is another component. But they're all Air Force, which is why we're a specified instead of a unified command.

Now there's going to be a unified space command. First, though, what are the existing missions? NORAD's mission is missile warning, space surveillance, and air-breathing air defense. The Canadians are signed up with us for those three mission areas in the Canadian/U.S. NORAD agreement, renewed every five years (it comes up for renewal next year). The agreement specifies those things that CINC NORAD is responsible to both governments for doing. That's all associated with North America. ADCOM is responsible for missile warning (we don't have any missile defense systems, so it's academic) and attack assessment, which is implied in missile warning. ADCOM is also responsible for space defense. Note the difference, space defense versus space surveillance. We're building a prototype mission operation control center, and we'll be assigned the ASAT weapon system when it comes into the inventory. We're assigned that kind of responsibility. If the Soviets threaten North America with any weapons systems based in space, our responsibility is to counter that. They don't have any, and we don't know if they're going to field any, but we need to worry about that a lot. It's tough too, because you need a pretty good crystal ball to predict what that threat might be, and lead times are long, so you'd better not be wrong. Of course, ADCOM is also responsible for air defense, just like NORAD.

Now, the resources for missile warning/attack assessment and space defense are provided by Air Force Space Command. Resources for air defense are provided by Alaskan Air Command and by ADTAC. What's this got to do with the unified space

command? What do we do about those missions? The Chiefs have decided that the unified space command should be responsible for operating space systems that support all the unified and specified commands, and for the employment of forces. Three kinds of space systems support military forces: surveillance, navigation, and communications. When I say surveillance I mean that in the broadest context; a weather satellite is a very important kind of surveillance.

As you may know, in World War II there was a battle where Halsey charged toward the objective and ran right into a typhoon. Several destroyers were lost in the typhoon, the cruiser *Pittsburgh* lost her front end — it was very serious. Ultimately it didn't affect the outcome of the battle, but that was because we were that much better off than the other side. If it had been close, we probably would have lost the battle.

That situation wouldn't happen today, because we downlink weather information from satellites directly all the time. Eisenhower's decision in World War II to invade Europe hinged very delicately on making the right guess about the weather. Had he taken one more day to make the decision, they would have had to wait a whole month until the tide and moon conditions matched up to make that invasion possible. General Eisenhower took the best information available, but he guessed, and he was lucky. Weather satellites would have made that an easy decision.

Other kinds of surveillance are also very important; you all know about them, I just want to tie them together. Navigation is being done by the transit satellite today, though it has limitations. The Global Positioning System will allow a maneuvering vehicle, a high performance aircraft, for example, to know constantly where it is within tens of feet. Think of the impact that that can have on weapons delivery, operations in bad weather conditions, and so forth. Think of the advantage for a force employer to have systems that can operate under those conditions. Communication is very important. We can deploy communications systems today that use spacecraft in effect as radio relay platforms. We can set up a communications link anywhere in the world as fast as an airplane can fly a terminal there. This is a jam-resistant, secure, point-to-point communication system that plugs right into the Defense Communication System, which is a huge organization. It gets bad-

mouthing a lot, but there's a level of rising expectations, so we always ask more of it.

We have extraordinary capabilities, both existing and planned, in all three areas of surveillance, navigation, and communications. Those are the only present military applications for which space systems are more advantageous than terrestrial-based systems. The Strategic Defense Initiative (SDI) is looking at systems that can defend against space-based ballistic missiles. And ideas about potential offensive systems have been around for years. There's the fractional orbital bombardment system idea, the multiple orbital bombardment system, and I could go on, but so far none of them has materialized.

There is now a decision to be made. We need operational control over the satellites that carry out our support missions. Those missions have become so prolific and so important to force employment, and will become more so as embedded parts of weapons systems, that we must have an operational chain of command for their direction and control. Except for the Satellite Early Warning system, which I'm responsible for as CINC AD, all our other systems in surveillance, navigation, and communication are controlled through the departmental chain of command, if you take into account the defense agencies that are outside of the operational chain of command. (The Satellite Early Warning System, by the way, is great; it can detect a ballistic missile launch anywhere in the world within minutes, characterize it by its signature, and then tell you where it's headed.)

The point is that for force employment the use of these systems has become so important that the President, the Secretary of Defense, and the Chiefs felt we ought to create a unified command to control these satellites and others that come along. Military Airlift Command is a good analogy, because transportation is also an important embedded support function. So the Chiefs have made that recommendation and the President has made the decision. One mission of the unified space command will be operational control of space systems, as designated by the JCS. We've now created that chain of command.

Another mission the unified space command will have is space control, and I put that in the same category as space defense. It's laid out separately in the joint paper, but as far as I'm concerned, you can't have very effective space defense without space control. Think of this as you would the control of

the seas. The definition of space control reads very much like that of space defense in the joint document that the Chiefs approved. Another mission will be warning and assessment of an aerospace attack on the United States, which is an ADCOM mission today. That includes all three kinds of warning: air, missile, and space threats. Of course part of that is warning of attack on our space assets. These space assets are so important to the strategic mission, it's inevitable that if the Soviets ever attack us they will attack these assets as well. They can't afford not to. These systems give us too much of a high-tech edge. They are, in effect, force multipliers. If they destroy those systems, they damage us severely.

Student: Dick Truly also has his naval space systems command, and a large part of his job is RDT&E. In the unification effort, will the R&D for SDI stay with the unified commander?

Herres: It will not. There will be no R&D responsibility in that chain of command. Whatever hat Dick Truly wears in the Navy with respect to R&D, he'll wear that separately from the Navy component hat. In other words, the Navy space command does not have an R&D mission. He may have a relationship with the R&D community in the Navy and some other responsibilities, separate from the space command. The Navy has organized its R&D community a little differently. We've got a much cleaner break in the Air Force between our R&D community and our operations than the Navy does. But as Commander of the Navy component of the unified space command, Truly will not have R&D responsibilities, and that unified commander will not have command or control or any direct influence other than writing requirements which go up the operational chain of command to the JCS and then over to the services and back down. As I was saying earlier, you must be very careful which chain of command you exercise. You would not go to your component and talk to him about R&D, if he had R&D responsibilities. That R&D responsibility comes down the department chain of command.

Student: When you say that space command will be able to take over operational control of surveillance systems, are you including in it what are called the "national means" of verification?

Herres: No.

Oettinger: Could I expand on that question, because it seems to me that part of what you've assigned to

Space Command in your diagram (figure 5) looks like intelligence systems. Are you there as executive agent? You know, one could interpret what you just said, including the statement that the President has signed off on it already, as an Air Force imperialist statement if one were uncharitable.

Herres: Oh, no, be careful now.

Oettinger: All right.

Herres: As assigned by the JCS, okay? I haven't said anything that implies the Air Force is going to take anything over. These missions are assigned, or will be assigned, in this operational, unified/specified chain of command, and it doesn't make any difference what color suit the guy wears. He's going to carry these out and he's going to be responsible through that chain of command. Now there will be blue suits and all different color suits over here, but it's still going to be a unified command. I mean it's no more of an Air Force takeover of space than there is a Navy takeover of Air Force assets in the Pacific. The Air Force contributes a larger percentage of the fire power to PACOM than the Navy will ever contribute to the unified space command. Last year the Air Force paid for 90 percent of the DOD space budget, the Navy paid for 6 percent, and the Army 4 percent. Now who's taking over what? I submit that the Air Force provided a lot more than 6 percent of the fire power of PACOM and EUCOM and yet they're commanded by CINCs of other services. The dominant command of the Pacific is still Navy and I'm not arguing that the command shouldn't be Navy. I'm saying it ought to be unified.

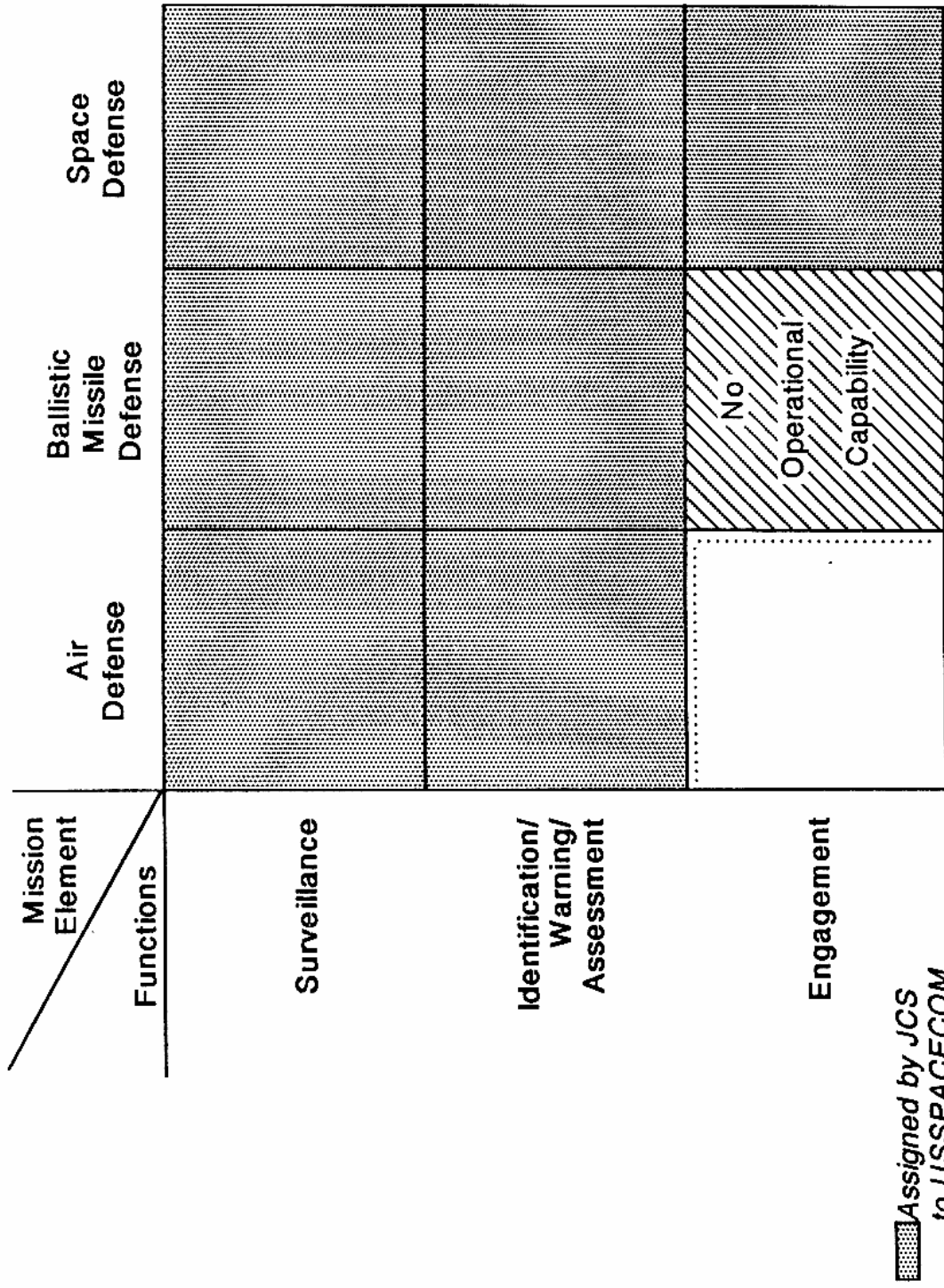
But let's keep things in perspective. There's a perception that this big unified command for space is being established because the Air Force wants to take over a bunch of space programs. We don't need to take over any more space programs. If we get

somebody to help us with those space programs and make it like 60 percent, 30 percent, and 10 percent, we'd be delighted because we could spend some of that Air Force money in other places. I want to disabuse everybody of this pejorative idea that we're out to take over. We'd like to get things organized; we'd like to make sure that this 90 percent of the budget gets spent well.

These are the three mission areas of strategic aerospace defense (figure 5). Within those mission areas there are surveillance functions, warning and assessment and identification functions, and engagement functions. Space defense is under Space Command. It's the only aspect of the strategic aerospace defense mission that has been assigned by the Chiefs so far. What's important is the line around the air engagement square. The detection/identification missions have all been assigned under warning and assessment of aerospace attack. So that takes care of the upper two layers of the matrix, all of which are assigned to the unified space command. We don't have any systems for ballistic missile engagement, but that's what the SDI program is all about, to see whether or not we can do that. So we won't worry about that in this chart, that somebody has to be responsible for planning and developing the requirements of a ballistic missile defense. When I say ballistic missile defense, I'm talking about SLBM and ICBM both.

What's left are the air-breathing, air defense engagement functions. That's what has the Chiefs hung up. If you are interested in a case study of the JCS system, how the joint process arrives at important, critical, long-range, and far-reaching decisions, watch this issue carefully. It's going to be interesting to see how it comes out.

Those are the issues in the unified space command; I've tried to make them as simple as I can. How all that comes out is going to be very interesting.



Strategic Aerospace Defense Mission

Figure 5